

**DRAFT**  
**FOR PUBLIC DISCUSSION**  
**OCTOBER 2008**

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**THEMATIC ENVIRONMENTAL HISTORY**

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**OF THE**  
**ALPINE SHIRE**  
**NORTH EAST VICTORIA**



**ALPINE SHIRE HERITAGE STUDY**

**JUNE 2008**

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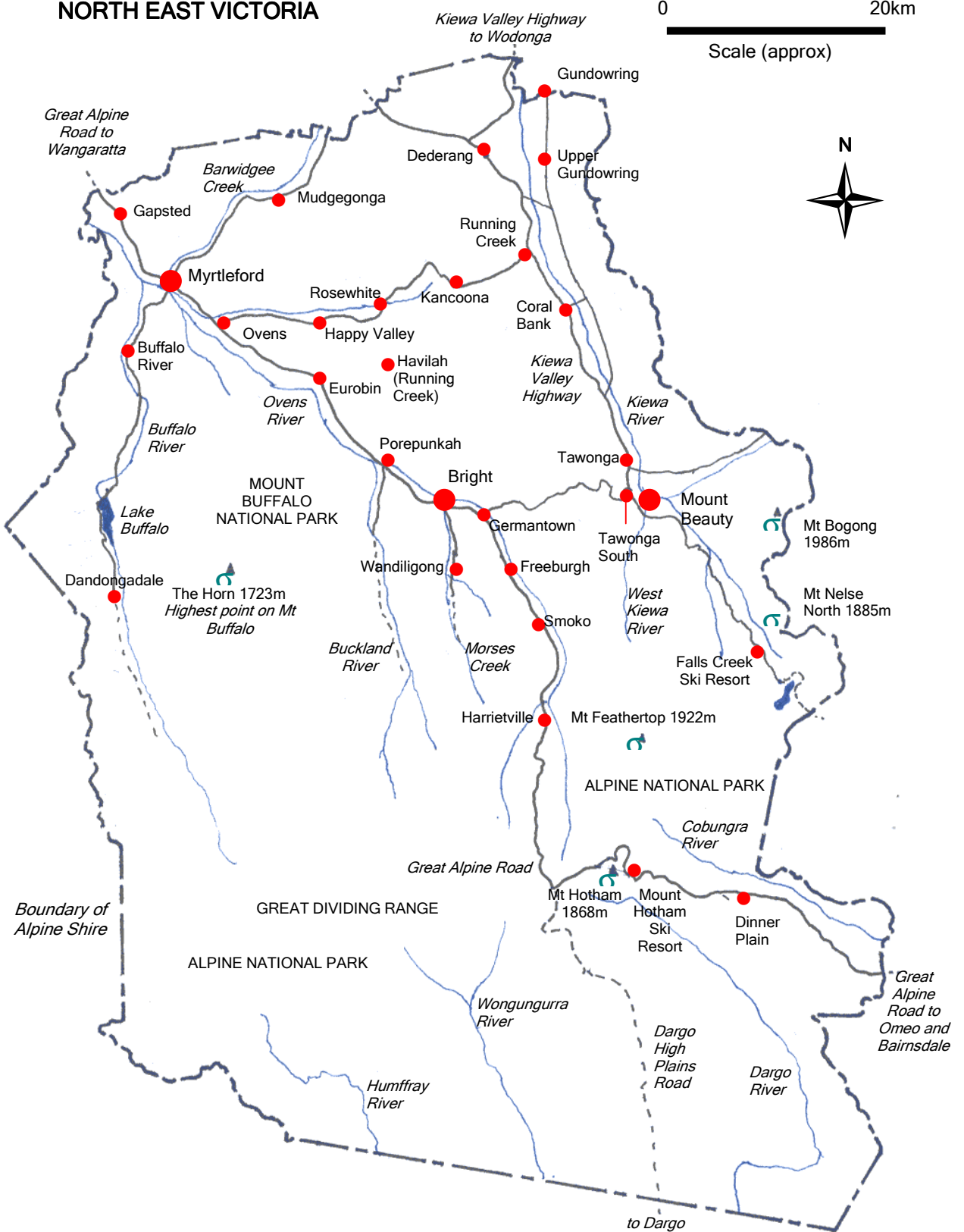
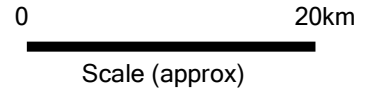
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# MAP OF ALPINE SHIRE NORTH EAST VICTORIA





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# INTRODUCTION

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## 1.1 PROJECT

A draft version of this Thematic Environmental History was produced as part of the Stage One outputs of the Alpine Shire Heritage Study, jointly funded by the Alpine Shire Council and the State Government through Heritage Victoria. The purpose of the Study has been to identify, assess and document all post-contact places of cultural heritage significance within the Alpine Shire and to make recommendations for their future conservation.

The draft Thematic Environmental History has been reviewed during Stage Two of the study, and this final report prepared.

Stage One and Two of the Study was undertaken by LRGM – Services, Heritage Consultants, Bright, Victoria, using a Project Team consisting of Rob Kaufman, Lorraine Thompson, Deborah Kemp, Dr Ruth E Lawrence and Andrew Swift. Project management has been supplied by a Steering Committee, and their guidance and advice is gratefully acknowledged.

## 1.2 ACKNOWLEDGEMENTS

Numerous other individuals and organisations have assisted the study and made valuable contributions to the preparation of this report. These people are gratefully acknowledged below:

Public Meeting, Mount Beauty (organised by Kiewa Valley Historical Society)

<i>Alex McCullough</i>	<i>Mount Beauty</i>
<i>Andrew Randell</i>	<i>Tawonga South</i>
<i>Anne McCall</i>	<i>Running Creek</i>
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<i>Noel Higginson</i>	<i>Tawonga</i>
<i>Philip Reid</i>	<i>Wodonga</i>
<i>Reg Hollonds</i>	<i>Tawonga South</i>
<i>Ron White</i>	<i>Mount Beauty</i>
<i>Roy Davies</i>	<i>Tawonga</i>
<i>Sue Randell</i>	<i>Tawonga South (Kiewa Valley Historical Society)</i>
<i>Yvonne Hollonds</i>	<i>Tawonga South</i>

Public Meeting, Myrtleford (organised by Alpine Shire)

<i>Iris Schlapp</i>	<i>Myrtleford (Myrtleford &amp; District Historical Society)</i>
<i>John Taylor</i>	<i>Myrtleford (Myrtleford &amp; District Historical Society)</i>
<i>Pat Dwyer</i>	<i>Myrtleford (Myrtleford &amp; District Historical Society)</i>
<i>Zuvele Leschen</i>	<i>Buffalo River</i>

Public Meeting, Bright (organised by Alpine Shire)

<i>Barry Coghlan</i>	<i>Wandiligong (Wandiligong Preservation Society)</i>
<i>Marj Cavedon</i>	<i>Porepunkah</i>
<i>Pat Pelly</i>	<i>Bright (Harrietville Historical Society)</i>
<i>Stuart Hargreaves</i>	<i>Bright</i>

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<i>Agnes O'Donnell</i>	<i>Wandiligong (Bright &amp; District Historical Society)</i>
<i>Bill Sutton</i>	<i>Mount Beauty</i>
<i>Coral Bennett</i>	<i>Wandiligong (Wandiligong Preservation Society)</i>
<i>David Bannear</i>	<i>Castlemaine (Heritage Victoria, Parks Victoria)</i>
<i>Derek Rolland</i>	<i>Bright</i>
<i>Diann Talbot</i>	<i>Wandiligong (Bright &amp; District Historical Society)</i>
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<i>Jane Kerby</i>	<i>Wandiligong (Bright &amp; District Historical Society)</i>
<i>John Wyman</i>	<i>Wandiligong (COM, Pioneer Park, Bright)</i>
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<i>Linda Reeves</i>	<i>Mudgegonga</i>
<i>Lyn Blandford</i>	<i>Mount Beauty (Alpine Shire)</i>
<i>Ray Addinsall</i>	<i>Mount Beauty</i>
<i>Ronice Goebel</i>	<i>Harrietville (COM, Hit or Miss Dredgehole Reserve)</i>
<i>Tom Taylor</i>	<i>Whealers Hill (Wandiligong Preservation Society)</i>

Many people who attended the public meetings also provided valuable follow-up support. In addition, the Bright & District Historical Society conducted an informal 'workshop', and members are thanked for their contributions. To any persons who assisted and whose names were inadvertently left off the above list, apologies and grateful thanks are extended.



### 1.3 THEMATIC ENVIRONMENTAL HISTORY

This Thematic Environmental History explores the key themes that have influenced the historical development of the Alpine Shire in North-East Victoria, since the first contact between Aboriginal and non-Aboriginal people. It is not a chronological or municipal history of the Shire, and the thematic approach is used to isolate and explain those aspects that are crucial to understanding the area and the historic physical fabric today. The Thematic Environmental History serves three essential roles:

- It ensures that places that are identified in the Study for conservation reflect and represent the historical development of the area;
- It can provide knowledge of places of historical importance that might not otherwise emerge, or for which there may be little if any visible evidence;
- It is a useful tool when undertaking comparative assessments of the significance of particular places.

The Thematic Environmental History is an historical study, but there has been no defined cut-off point in time applied. However, it is often difficult to judge the importance that recent events may have on the study area, and only time enables the contribution of these events to be placed in perspective. In general and where applicable, recent events are briefly addressed in each theme to provide continuity to the present day. Some relatively modern events, such as the construction of the Kiewa Hydro Electric Scheme that continued into the 1960s and had a profound impact on the development of the Shire, are addressed in detail. Others, such as the Dinner Plain development in 1986, are considered too modern to adequately gauge their contribution.

Throughout the draft, the use of the words 'Alpine Shire' and 'Shire' refer to the area within the boundaries of the modern Shire, and are not meant to imply the existence of such local government boundaries in historical times. Because of the thematic approach, there is some duplication of information within the history, arising from interdependencies.

The Ovens valley section of the Shire unavoidably accounts for the larger portion of this history, because from the time of contact to the mid-twentieth century, this section saw by far the greater populations and level of industry. Even today, approximately 70% of the Shire's population lives in the Ovens valley. Future histories of the Shire may progressively reduce this apparent imbalance.

Numbered references in the main text are included as endnotes at the back of the document. Measures are given in the units used at the time, and conversion tables are included in Appendix 2.

## 1.4 HISTORIC THEMES

The following table identifies the key historic themes that have influenced the Alpine Shire. Theme descriptions follow the Australian Heritage Commission's Australian Historic Themes, and rationale for inclusion is given. The AHC theme descriptions are not always adequate – those for tourism, for instance, are very narrow and do not cover the full breadth of the theme. Nevertheless, the full breadth of the theme as it applies to the Alpine Shire is elicited in the Thematic Environmental History.

The themes are used in a discriminating manner. For instance, a number of schools exist within the Shire, but education (AHC Theme 6.2 – Establishing schools) is not an important theme because every municipality will have its schools. It would only have emerged as a theme if the Shire had been recognised, say, as a centre of higher learning in the State. Similarly, every municipality has its cemeteries but this does not mean that the theme of 'dealing with human remains' (AHC Theme 9.7.1) needed elaboration with respect to Alpine Shire. However, this theme would have great importance in Greater Dandenong say, where the Necropolis is a major facility that serves a wide geographic area.

**TABLE 1: KEY HISTORIC THEMES**

	MAIN THEME		SUB-THEME		SUB-SUB-THEME	RATIONALE
1	Tracing the evolution of the Australian continent	1.3	Assessing scientifically diverse environments			Scientific study of the Alpine and forested environments was extensive, and underpinned later public land management and conservation. This theme is unlikely to yield many physical sites, but is included in the study as a preface to public land management and conservation themes.
2	Peopling Australia	2.4	Migrating to seek opportunity			Various waves of migration, beginning with the early gold rushes, had significant impacts on the demographics of the Shire, and the development of industry, particularly agriculture (Chinese & Italian influence).
		2.6	Fighting for land	2.6.2	Displacing indigenous people	This is an underlying and largely forgotten theme. The post-contact, rapid and total demise of aboriginal culture within the Shire enabled a complete imposition of European culture (cf many other areas of the State where indigenous people and remnants of indigenous culture survived). This theme is unlikely to yield physical sites within the Shire (eg there were no aboriginal missions set up, etc). However, prefacing the Thematic Environmental History with this theme is an appropriate way of recognising that human history did not begin with the arrival of the squatters. The post-contact demise is very poorly recorded.
3	Developing local, regional & national economies	3.3	Surveying the continent	3.3.3	Looking for precious metals	These themes are also unlikely to yield physical sites. In the absence of early explorers within the Alpine Shire, the first squatter into the area defines the moment of 'contact', and the base line for this study. Both sub-sub-themes underpin the development of two of the major economic themes of the study (agriculture & mining), and are included as prefaces to both.
				3.3.4	Looking for land with agricultural potential	
		3.4	Utilising natural resources (5.1 Working in harsh conditions) (3.16 Struggling with remoteness, hardship and failure)	3.4.3	Mining	Mining for gold had a fundamental impact on the Shire, drawing large populations to the area, stimulating development of the first townships in the Shire, and creating demand that led to intensification and diversification of agriculture, and the initiation of hardwood logging & milling. Dredging for gold directly resulted in the first softwood plantations in the Shire, using derelict, dredged land. The staggeringly high mortality rates on the Buckland River diggings contribute to the bracketed themes. This is reinforced by the generic risks associated with mining in historic times, and may translate to physical sites relating to mining disasters, accidents & graves. The mining theme may also include government-sponsored mining track surveys and construction.
				3.4.4	Making forests into saleable resources	Hardwood and softwood logging & milling have been important economic contributors to the development of the Shire. This began with sawmills to provide timber to build the first mining townships. Later industrial use in mining was significant, and related to the characteristics of mining within the Shire, with development of large scale quartz

	MAIN THEME		SUB-THEME		SUB-SUB-THEME	RATIONALE
						mining, and later dredging. Forest industries grew to serve essentially local demand, and later (as transport improved) State demand. Large softwood plantations began as 'rehabilitation' of dredged land, and softwood growing & milling is now the predominant forest industry in the Alpine Shire.
				3.4.5	Tapping natural energy sources	The Kiewa Hydro Scheme was a massive engineering undertaking of its time, drawing immense labour resources and resulting in the creation of the Alpine Shire townships of Mt Beauty, Bogong & Falls Creek. Earlier use of a variety of water power technologies in industry (gold mining) was significant, and contributes to the theme.
		3.5	Developing primary production	3.5.1	Grazing stock	First European land use in Shire, and still a significant part of agriculture within the Shire. Early development of High Country grazing, and installation of network of huts, yards and tracks over large area. Icon of regional tourism. Dairying included in theme.
				3.5.3	Developing agricultural industries	Agriculture affects all the valley areas of the Shire, and has been a significant contributor to the local economy throughout post-contact history. Wide diversification from cattle & sheep grazing a key characteristic –hops, flax, grapes, tobacco, nuts etc. Chinese influence in early cropping, Italian influence in various waves of migration. Important tobacco and hops research stations were established within the Shire.
		3.9	Farming for commercial profit (5.8 Working on the land)			
		3.11	Altering the environment	3.11.1	Regulating waterways	Minor theme (all towns have to have water supplies). However, Lake Buffalo was a large civil-works undertaking, services more than just the local area, and contributes strongly to recreation & tourism in the Shire. Earlier widespread harnessing of water supplies for industry (gold mining) contributes to this theme.
				3.11.5	Establishing water supplies	
		3.22	Lodging people			Tourism has emerged as the dominant economic contributor in many parts of the Shire today, and its growth can be charted from the late 1800s. The ski fields and service towns such as Bright & Mt Beauty are key tourism nodes in State terms.
		3.23	Catering for tourists			

	MAIN THEME		SUB-THEME		SUB-SUB-THEME	RATIONALE
4	Building settlements, towns & cities	4.5	Making settlements to serve rural Australia 4.6 Remembering significant phases in the development of settlements, towns & cities			The townships of the Shire, in their origins, distribution, size, growth patterns & other characteristics, contain abundant evidence of the historical development of the Shire. The Alpine Shire has some unusual features, in that several towns are of relatively recent origin, developing from either the Kiewa Hydro Scheme (Mount Beauty, Bogong), or from ski fields tourism (Falls Creek, Mt Hotham, Dinner Plain). The earliest towns (Myrtleford, Bright, Wandiligong, Harrietville etc) developed directly from gold mining, but some smaller towns (eg Tawonga, Dederang, Mudgegonga) developed from intensified agriculture following land selection from 1860 onwards. The Shire also has a large number of 'failed' townships, which died as gold resources petered out, or as modern transport & communications overtook their reasons for existence.
7	Governing	7.6	Administering Australia	7.6.9	Conserving Australian resources	The dominance of forested Crown land in the Shire means that the management and protection of forest resources has been an important historical theme. Theme includes hardwood management, fire protection, weed control etc.
				7.6.10	Conserving fragile environments (1.4 Appreciating the natural wonders of Australia)	National Parks make up a significant percentage of the land area of the Shire, and conserve rare & fragile Alpine environments and spectacular mountain scenery. Their development can be charted from the late 1800s, and they are important drawcards in tourism in the area. Their management has provided employment and other benefits to local communities.

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# CULTURAL HERITAGE SIGNIFICANCE OF THE ALPINE SHIRE

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## 2.1 PREAMBLE

Prior to local government amalgamations in 1994, many Victorian municipalities had historical relevance in the development of their local communities, in that they were born in the first emergence of substance in those communities, grew with those communities, and carried a unique identity into the modern era. The most important expression of cultural heritage significance that will be found in municipalities is what they tell us about the growth of Victorian communities.

Post-amalgamation, most municipalities are based on service delivery economics and defined by arbitrary boundaries. They may encompass several former municipalities, and hence several former historical groupings. The Alpine Shire is one of the rare municipalities that, while expanded significantly in area, has basically retained the original communities of the old Shire of Bright, prior to the creation of the Shire of Myrtleford in 1960. It is possible therefore to broadly look at the Alpine Shire communities as a single and strongly historically-related entity, even given that differences may exist from place to place within the Shire.

## 2.2 COMPARATIVE ANALYSIS

The Alpine Shire, like all other municipalities, has components of its history that are rare and important, and all of its principal historic themes are shared to varying degrees by one or more municipalities in the State. The key to unravelling the significance of the Alpine Shire lies in unravelling what makes the Shire different – its unique or important characteristics and contributions. Its history is very much related to its geography, and the first step in comparative analysis is to identify similar geographic areas in Victoria.

The mountainous areas of Eastern Victoria are the logical place to start. European settlement in all of the municipalities began with pastoral activities, and the mountain goldfields played a crucial part from the 1850s onwards in establishing populations in Eastern Victoria. With the decline of the goldfields, many mountain townships with no other means of survival disappeared, and agriculture and forest industries played a major role in sustaining the remaining populations. Alpine Shire shares this history in common with many other eastern municipalities. But significant

differences begin to emerge in the Alpine Shire in the late 1800s. This included the emergence of niche agriculture (tobacco, hops, nuts etc) on the relatively limited amount of fertile land available and the early development of tourism, based on the scenic attractions of the area, including the High Country and the local snowfields.

Snow and High Country based tourism is more limited in the State, because the geographic environments are very limited. The Alpine Shire snowfields were the first developed, from the 1880s onwards, despite their greater

distances from Melbourne. Mt Buller (Mansfield Shire, 1920s) followed, and later Mt Donna Buang (Yarra Ranges Shire), Mt Baw Baw & Mt St Gwinear (Baw Baw Shire) and Mt Stirling (Mansfield Shire)<sup>1</sup>. The Alpine Shire snowfields were different in that they were first opened solely by local community action. In the early years, snow recreation was considered an added bonus to the mountain and High Country experience, but soon evolved to become a core feature. In regional Victoria, the Shire was one of a number of leaders in early domestic tourism development. Bright, the strongest focus of early tourism in the Shire, was moulded over time by the local community from a wasteland of gold diggings into the epitome of a picturesque village. Town beautification by planting of introduced trees along streets and avenues forms a significant part of the tourism attraction of the town, and the marked seasonal changes in the appearance of the town contrasts strongly with the uniform and constant green of the native forests. This course was charted from the 1880s by far-sighted civic leaders, as a survival mechanism for the town and district, suffering with the decline of the local reef mining industry. Warburton in the Yarra Ranges Shire has a similar history, of a struggling gold mining area in the mountains turning to tourism. That area became very popular with Melbourne people after the railway was connected in 1901, and guest houses proliferated.

In the mid 1900s, the Kiewa Hydro Electric Scheme, a government infrastructure project based on the geography and hydrology of the Alpine Shire, also had a massive and on-going impact on the Shire. The Kiewa Scheme was the largest of a number of significant, resource-based government infrastructure projects in eastern Victoria in the twentieth

century. Other large infrastructure projects included Lake Eildon, the Thomson Dam, Lake Dartmouth and the Gippsland power stations. The Hume Reservoir in New South Wales also had significant impact on adjoining Victorian municipalities.

Niche agriculture developed in other areas, and the Tambo valley in East Gippsland Shire shared much in common with the Ovens valley. The Tambo was a significant hops and tobacco growing area in the late 1800s and early 1900s, but its industry did not survive<sup>2</sup>. Alpine Shire's intensive and specialised agriculture, best exemplified in the Ovens valley portion, is an historical by-product of the fertility of the soil, the climate, the skills base in the local population, and the relatively limited amount of agricultural land available to support the historical populations. The differences in the development of agriculture between the sparsely-populated Kiewa valley and the parallel, closely-settled Ovens valley from the 1850s to the 1940s is the best evidence of the operation of an imperative that demanded best economic use of the land available. Notwithstanding this, traditional agricultural activities of beef production and dairying have persisted in both valleys to the present day.

Native hardwood is the strong forest industry theme in many eastern municipalities, while the softwood plantations are the strongest at Alpine. These were the first pine plantations in eastern Victoria, although many followed in other areas, particularly in Towong Shire, the South Gippsland area, and Benalla/Mansfield<sup>3</sup>.

In planning the first pine plantations in the Ovens valley, there was strong emphasis on the need to create a new industry that would compensate for the devastation caused to local native forests by the mining industry<sup>4</sup>.

The recurrent theme for Alpine Shire is the survival and adaptation of communities existing in an historically fairly remote, mountainous area with abundant natural resources, including gold, timber, water, snowfields and scenic attractions, but with comparatively little fertile agricultural land. The evidence of this today lies in the fabric of the Shire, in the towns, the farms, the diggings and the mountains. The Shire's significance to the State lies in the story of this evolution.

### **2.2.1 GEOGRAPHICAL DIFFERENCES**

- 92% of the area of Alpine Shire consists of mountainous, forested Crown land. This percentage is unapproached in any other municipality in Victoria. Alpine Shire is a relatively large municipality with only a few thin ribbons of freehold land, along the sheltered river valleys.
- Alpine Shire has the highest altitude areas in the State, including Victoria's highest mountain, Mt Bogong, and 13 of the State's highest peaks. Consequently the Shire has the State's highest altitude snowfields.

### **2.2.2 SIGNIFICANT HISTORICAL ELEMENTS**

#### **Buckland Riots**

Between 2000 and 2500 Chinese diggers were driven violently from the Buckland goldfield in 1857, the first major outbreak of anti-Chinese sentiment on the Victorian and Australian goldfields. The Chinese expulsion was a major event in National terms, making front page news across the country, and forcing changes to Victorian government immigration Acts and policies. It is widely acknowledged as the first landmark event in a long road that eventually led to the White Australia Policy<sup>5</sup>.

#### **Mining**

One of the major goldfields in Eastern Victoria, but there was no element of mining that was particularly characteristic to the Shire until bucket dredging began in 1900. The Ovens Valley became by far the most heavily dredged area in Australia. Between 50 and 60 dredges worked between 1900 and 1954, and about ¾ million ounces of gold was won from this form of mining. The Shire also had the largest dredge ever to operate in Australia, the Tronoh (Mammoth) Dredge at Harrierville.

#### **Conservation**

The Ovens Valley Farmers' Land Protection League (Anti-Dredging League) and the Ovens River Anti-Sludge Pollution Association formed in 1907 in Myrtleford and Wangaratta were probably Victoria's first organised, broad-based, community environmental lobby groups, protesting against water pollution and land degradation. In modern times, the birth of environmental action groups in Australia has been proposed in some quarters to lie within the Alpine Shire gold dredging fields<sup>6</sup>. Dredging also precipitated the creation of the Sludge Abatement Board in 1905, the Victorian Government's first positive action in controlling soil loss and erosion<sup>7</sup>. The Alpine Shire also has large areas of National Park within its boundaries, conserving Alpine environments that are extremely rare in the State and the nation. These environments also contain some of the most



spectacular Alpine and mountain scenery in the State. The Alpine Shire has one of the first National Parks reserved in the State (Mount Buffalo National Park, 1898). Its reservation can be credited almost entirely to the local communities, who were very active in lobbying for its creation.

### **Agriculture**

Agriculture within the Shire has its own special characteristics. The shortage of land and the fertility of the sheltered river valleys are among the many influences that encouraged diversity, particularly in the Ovens valley. The shortage of suitable land also encouraged seasonal use of the grassy high plains for summer grazing. While traditional grazing and dairying activities persist, specialised crops have always been and still are a signature of the Shire's agriculture. It has a long history of tobacco growing, going back to the Chinese in the Buckland Valley in the 1850's. In recent times, the Alpine Shire contained the majority of the only large-scale, commercial field left in Australia after the closure of the Mareeba fields in Queensland. However, the tobacco industry was ended by a vote of growers in 2006. The Shire contains mainland Australia's only commercial hop-growing, accounting for some 30% of national production. The Alpine Shire is a significant nut producer – chestnuts, hazelnuts & walnuts. It was the biggest growing area for these nuts until recent years and had the largest walnut farm in Australia, but large acreages have recently been planted elsewhere. The Shire still dominates Australian chestnut production. Other commercial crops, historical and recent, include apples, pears, plums, mulberry trees, grapes, lavender, cut-flowers, flax, asparagus, raspberries, blueberries, exotic trees (nurseries), hemp, vegetables (market gardening), cherries, figs, persimmons, almonds, wheat, maize, broom corn, millet, oats, peas, potatoes etc.

### **Hydro-electricity**

The Kiewa Hydro-Electric Scheme was one of the largest civil engineering feats ever accomplished in the State, and is the largest supplier of energy from a renewable source in Victoria. The Kiewa Scheme provided massive employment, townships, roads, and enabled the development of Falls Creek ski field.

### **Tourism**

Alpine Shire is one of the pioneering areas of large-scale, organised tourism in the State, dating back to the 1880s with the formation of the Alpine Club and Tourist Association. The Ovens valley communities were the leaders in the development of recreational and sporting skiing in the State, pre-dating the first Mt Buller developments by nearly 40 years. The Bright district and associated snowfields have been entrenched in the top level of Victorian domestic tourism destinations for well over 100 years, and with modern developments in all areas, the Shire today attracts over two million visitors per year.

## **Townships**

The Shire shows a wide variety of mechanisms and ages in the formation of its townships:

- Gold towns from 1850s – eg Myrtleford, Bright, Harrietville, Porepunkah, Wandiligong;
- Small agricultural towns from c1870s-1880s: eg Tawonga, Dederang, Mudgegonga
- Hydro towns from 1940s – Mount Beauty (1946), Bogong (1939)
- Tourism (ski field) towns – Mt Hotham (1920-30s), Falls Creek (1940s-50s), Dinner Plain (1980s)

The Shire also has dozens of former towns. The earliest and for some years the largest townships in the Shire, in the Buckland valley, no longer exist. Many gold towns & small, whistle-stop, agricultural towns also no longer exist. The Shire demonstrates a very unusual dynamic in the shedding of old towns and formation of new towns over the whole of its post-contact history. This wider dynamic is also represented within many towns of the Shire, which have recycled themselves in order to survive, by diversifying their economic bases or radically adapting to new industry. Mount Beauty is a rare, well-preserved, 'model town' of its era.

## **2.3 STATEMENT OF SIGNIFICANCE**

The recurrent and unique theme for Alpine Shire is the survival and adaptation of communities existing in an historically fairly remote, mountainous area with abundant natural resources, including gold, timber, water, snowfields and scenic attractions, but with comparatively little fertile agricultural land. This is expressed in many ways, including its diverse and specialised agriculture, new township formation, recycling of townships, and growth of industries such as tourism.

The Shire is historically significant for its development of niche agriculture. While traditional grazing and dairying activities persist, specialised crops have always been and still are a signature of the Shire's agriculture. It has a long history of tobacco growing, going back to the Chinese in the Buckland Valley in the 1850's, and today, with the closure of the Mareeba fields in Queensland, the Alpine Shire contains the majority of the only large-scale, commercial field in Australia. The Shire contains mainland Australia's only commercial hop-growing, accounting for some 30% of national production. Nut growing is another important niche activity.

The Alpine Shire contains large areas of National Park, conserving rare and fragile alpine environments, and tracts of some of the most spectacular Alpine and mountain scenery in the State. The Shire is historically significant for the local community action and lobbying that led to the reservation of one of Victoria's first National Parks at Mount Buffalo in 1898.

Alpine Shire is historically significant for its pioneering role in large-scale, organised tourism in the State, dating back to the 1880s with the formation of the Alpine Club and Tourist Association. The Ovens valley communities pioneered recreational and sporting skiing in the State from the 1880s onwards, at Mount Buffalo and in the high-altitude snowfields of the Main Divide. The Bright district

and associated ski-fields have been entrenched in the top level of Victorian domestic tourism destinations for well over 100 years.

The gold dredging era of 1900 to 1954 entrenched the Ovens Valley as the most heavily dredged area in Victoria and Australia, and saw the operation of the largest dredge ever to work in Australia, the Tronoh or Mammoth Dredge at Harrietville. As a corollary, the early dredging era saw the emergence, within the Shire and adjacent areas, of the State's first organised, broad-based environmental lobby groups, protesting against water pollution and land degradation. It also saw the establishment of the State's first environmental watchdog, the Sludge Abatement Board. Pine plantings on dredged land at Bright in 1916 were the beginnings of the softwood timber industry in Eastern Victoria.

The Shire also contributes the largest amount of renewable energy to the power grid from within Victoria. The Kiewa Hydro-Electric Scheme, built from the 1930s to the 1960s, was the largest civil engineering project of its time in the State. The Kiewa Scheme provided massive employment, new townships and roads to the Shire, and enabled the development of Falls Creek ski field.

The Alpine Shire is of historical importance for the Buckland Riots of 1857, the first major outbreak of anti-Chinese sentiment on the Victorian and Australian goldfields, and with the Lambing Flats, NSW, riots of 1861, the two worst race riots experienced in Australia. The Buckland Riots are widely regarded as the first landmark event in the eventual formation of the White Australia Policy.

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# THEMATIC ENVIRONMENTAL HISTORY

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## 3.1 SETTING

The Alpine Shire encompasses an area of 4397 square kilometres of North East Victoria, and is dominated by forested mountain ranges. It contains the headwaters of two major Victorian rivers, the Ovens and the Kiewa, and the north-west trending valleys of these rivers provide narrow, sheltered and fertile strips of flood plain for agriculture and settlement. The mountains of the north-west half of the Shire are forested foothills, of relatively gentle slope and moderate altitude. Large patches of darker green mark the extensive pine plantations of the area. The foothills rise in chains to the south-east, reaching a solid barrier that is the spine of the Great Dividing Range, containing the highest mountains in Victoria, including Mt Bogong (1986m), the highest mountain in the State, Mt Feathertop (1922m), Mt Loch (1887m), Mt Nelse (1885m) and Mt Hotham (1868m). In the high regions lie the Bogong, Hotham/Cobungra and Dargo High Plains, basalt-covered plateaus with extensive areas of snowgrass and alpine herb fields. The mountain barrier also contains the major ski resorts of Mt Hotham, Falls Creek and Dinner Plain, and the workings of the Kiewa Hydro-Electric Scheme, as well as significant areas of the Alpine National Park. Roads connecting North East Victoria to Gippsland across the Alps are few, and in the Alpine Shire only the Great Alpine Road provides year-round access. Further to the south-west, the altitude drops off again towards Omeo and Dargo.

On the west side of the Ovens valley lies the granite massif of Mt Buffalo, whose sheer rock walls tower over the valley and hide the ancient, worn plateau behind. To the west of the Mount Buffalo National Park, the Buffalo River, a tributary of the Ovens, provides the third and smaller strip of agricultural land. Along the river valleys are dotted the farms and small towns of the Shire. The largest towns are Myrtleford and Bright in the Ovens valley, and Mount Beauty in the Kiewa valley. The other towns are very small. Myrtleford, the largest town, is in the lower valley, and the principal service, supply and support centre for agriculture and forestry in the Shire. Farms crowd into the town on its western side, and small farmhouses are absorbed into the urban fabric. Bright is the administrative centre, and sits in the upper valley, seemingly surrounded by hills. It is a leafy, picturesque place moulded by over a hundred years of tourism. Mount Beauty is a well-preserved, purpose-built 'model town', left over from the construction of the Kiewa Hydro-Electric Scheme. Agriculture is diverse. The Ovens valley landscapes contain evidence everywhere of what was until recently one of its largest industries, tobacco growing. Numerous other niche crops including hops, nuts and grapes are grown, interspersed among the cattle and dairy farms. The lower parts of the Kiewa valley are dominated by dairying and grazing, but tobacco and grape growing become stronger in its upper reaches.

The Alpine Shire as we see it today is the logical product of the influencing factors in its post-contact history. At a local level, it is the product of its climate, topography and geology, which provided the opportunities for development and set the upper and lower limits on that development, and tempered by the initiative of individuals who made the Shire their home. The geology determined the

nature, scale and distribution of gold deposits within the Shire, and the soil qualities of the valleys for agriculture. The topography and climate allowed the development of the Kiewa Hydro-Electric Scheme, and the ski fields of the Shire, and provided the magnificent, forested scenic backdrops that are a feature of the Alpine experience. At a wider level, it has also been modified by external historical influences - political, economic and social – that shaped the region, State, and nation.

## **3.2 PEOPLING AUSTRALIA**

### **3.2.1 FIGHTING FOR LAND**

#### **Displacing Indigenous People**

This is a post-contact history of the Alpine Shire, but it must be acknowledged that Aboriginal presence in the Shire did continue beyond first contact. More fundamentally, it must also be acknowledged that the human history of the Shire did not begin when the first European squatters took up land in the valleys of the area. The total and rapid displacement of indigenous people from the valleys and mountains that constitute the Alpine Shire has ramifications in the modern demographics and cultural life of the Shire, because it enabled absolute emplacement of introduced cultures.

#### **Aborigines of the Alpine Shire<sup>8</sup>**

The traditional names of the Aboriginal people who once occupied the upper Kiewa and Ovens Rivers have not been preserved. The Mogullumbidj were known to have lived in the vicinity of Mt Buffalo. The languages spoken by the Aborigines of the area were Minubuddong in the Mt Buffalo environs, Theddora in the upper Kiewa Valley, and an unnamed Kulin dialect in the Upper Ovens and Buffalo River valleys (the Kulin people lived in central Victoria)<sup>9</sup>. The traditional lifestyle of the Aborigines in the Alpine Shire is evidenced by over 25 known occupation sites (including the important art site at Mudgeegonga), more than 50 known Aboriginal artefacts originating from the Shire, and about 20 location names in common usage either of Aboriginal origin or referring to Aboriginal activities<sup>10</sup>.

Aborigines of the upper Buffalo, Ovens and Kiewa valleys first

encountered European settlers in the mid to late 1830s, although diseases introduced by the Europeans had affected the Aborigines for decades before they even saw white people<sup>11</sup>. As with Aborigines elsewhere in Australia, their reaction to European colonisation changed progressively over time. Initially, the Aborigines sought ways of integrating the visitors into their traditional lifestyle – animals such as sheep and cattle that were introduced into traditional hunting lands became new food sources for the people. When squatters reacted with hostility, some Aborigines resorted to guerrilla warfare in an attempt to rid the land of the invaders. When the Aborigines killed European stock and shepherds, Europeans responded with the gun and killed many Aborigines<sup>12</sup>. During the mid to late 1830s, Europeans openly engaged in lethal retaliations on the Aborigines, even though it was legally forbidden, and the massacre site at

Blacks Flat near Mudgegonga probably dates to that era<sup>13</sup>. After 1838, when several N.S.W. Europeans were hanged for murdering Aborigines, the practice of killing the 'troublesome' Aborigines continued, albeit in a much more secretive manner<sup>14</sup>. Settlers used poisons to kill the Aborigines, rather than the gun, and the House Creek burial mound near Gundowring may relate to such an incident. However, there is evidence to suggest that the mound was there when Europeans first entered the valley. Aboriginal numbers steadily declined during the 1840s and then rapidly declined after the discovery of gold in 1851 brought many European and Chinese to the Shire. Due to this population decline, the Aborigines became disconnected with their culture during the 1850s and '60s, and were reduced to small groups leading a semi-nomadic lifestyle in the midst of advancing European development<sup>15</sup>. By 1858, it was estimated that fewer than 50 people remained of all the Aboriginal groups whose lands had extended over a vast area, from the plains of Wangaratta to Omeo and along the Mitta Mitta River<sup>16</sup>.

The 'big tree' at Myrtleford, a camp site on the banks of the Kiewa River

at Tawonga, and a camp site at Wandiligong are indicative of the significant locations the remnant Aborigines continued to visit during those decades<sup>17</sup>. A photograph depicting Aborigines assisting in harvesting hops in the Bright area also probably dates to that era<sup>18</sup>. During the 1860s and '70s, government reserves and church missions were established to encourage settlement of the remnant Aborigines, and the Aborigines of the Alpine Shire were encouraged to settle at the Tangambalanga Reserve (just north of the Shire) between 1862 and 1873<sup>19</sup>. Several children were taken from the area (stolen generation) in 1873 and relocated to Coranderrk near Healesville, and the adults were relocated to the Murray Valley or Gippsland<sup>20</sup>. Individual Aborigines lived in the Alpine Shire for the next few decades, but were mostly foster children from other parts of the State. However, a few Aborigines still visited summer hunting grounds at Nug Nug until as late as the 1890s<sup>21</sup>. During the twentieth century, few Aborigines have lived within the Shire, and those who did have originated from other parts of Australia.

*Text for this section provided by Dr Ruth Lawrence*

### 3.3 DEVELOPING LOCAL, REGIONAL & NATIONAL ECONOMIES

#### 3.3.1 SURVEYING THE CONTINENT

##### Looking for Land with Agricultural Potential

The significant event in the opening up of squatting lands within the Shire was the passage of the explorers Hume and Hovell through the district in 1824. Crossing and naming the Ovens River near Whorouly, they remarked on the quality of the land. Subsequently, squatters began to move into the district from the north, looking for land with agricultural potential. This, and several other illegal occupancies in the Port Phillip District forced the New South Wales Government to open up the lands for licensed squatting. These runs constituted the first layer of non-indigenous occupation of the Alpine Shire, and represent the base-line of contact for study purposes.

The timelines for the take up of squatting runs in the Shire is presented below. The list does not include later transfers, break-up or amalgamations of runs, or runs taken up in the post-gold era. There is some variation quoted in the sources used.

1837 John Hillas takes up Myrtle Creek run, of 35,000 acres.

1838 Pincent & Roberts take up Dederang run, 17,500 acres.

1839 Charles H Barber takes up Gundowring run, of 18,520 acres. William Forlonge squats on the upper reaches of Happy Valley.

1841 James Roberts takes up Tawonga run, of 20,000 acres.

1844 Thomas Buckland squats on Buckland run (later Wandillegong); John Buckland takes up Barwidgee run (first licensed in 1847 to William Forlonge); John Johnston takes up Merriang run (first licensed in 1846).

1845 William Walker & Co take up Port Punka run, 16,000 acres.

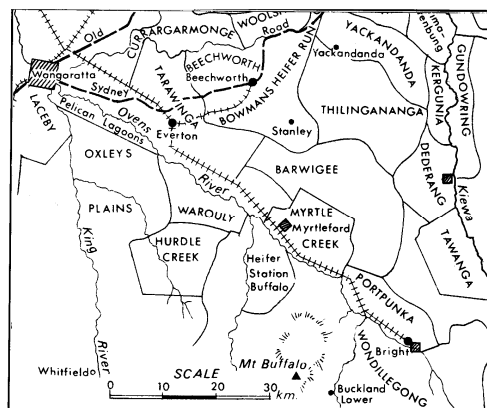
1845-46 W Campion squats on Dandongetty (Dandongadale).

1846 George Faithfull takes up Buffalo Heifer Station (Buffalo run, of 25,600 acres.

1847 William Walker & Co take up Junction run, of 25,000 acres; William Forlonge takes up Wandillegong run, of 28,000 acres; P Reynolds takes up Mullindolingong run.

1850 Ardley & Sheppard take up Nog Nog Wah run, of 16,000 acres.

A number of other runs of the period, such as Kergunia (Kergunyah) 1837, Warouly (Whorouly) 1839 and Cobungra 1851, had small areas within the present Shire boundaries.<sup>22</sup>



Some of the early squatting runs in the district (from 'Wandillegong - A Valley Through Time', Wandillegong Preservation Society, 1988)

### 3.3.2 DEVELOPING PRIMARY PRODUCTION

The fertile soils of the river valleys of the Alpine Shire support a range of agricultural endeavours today, and contribute significantly to the economy of the Shire. The Alpine Shire is recognised for its tobacco, hops, nut, apple, cattle and dairy farming. The diversity in agriculture, and the marked difference between the predominantly dairying Kiewa valley and the intensive cropping and niche produce of the Ovens valley is a product of their respective historical development.

There were several key changes to agricultural land holdings in the post-contact history of the Alpine Shire. These changes were mirrored throughout regional Victoria.

#### **Squatting Holdings**

From 1837, large areas of land were leased for the grazing of sheep & cattle. Changes to legislation in 1847 enabled squatters to purchase freehold title on their homestead land, up to 640 acres;

#### **'Gold Rush' Farms**

From about 1854, these consisted of small holdings adjacent to towns & diggings in the Ovens valley, sometimes held under Miners Right. Orchards, intensive cropping, market gardening, and dairying were carried on to satisfy local demand for fresh produce;

#### **Land Selection Holdings**

The huge population increase in Victoria during the 1850s gold rush period brought intense pressure to 'Unlock the Land' and break the grip of the squatters on the colony's farming land. Victoria led the way in Australia, enacting the first legislation in 1860, after a Land Convention in 1857. New South Wales followed suit in 1862, and Queensland in 1868<sup>23</sup>. From 1860 to 1869, various land selection acts were introduced which

enabled squatting holdings to be broken up into smaller farms. Selection in the Shire began in the 1860s, and intensified after the 1869 '*Poor Man's Act*'. Grazing, dairying and cropping were carried on;

#### **High Country Grazing Leases and Licenses**

Granted from the 1860s onwards, these tenancies enabled summer use of the high plains, and saw development of infrastructure including huts, yards and tracks over a wide area;

#### **Soldier Settlement Holdings**

At the end of World War I, the Victorian Government purchased land near Myrtleford, and created the Barwidgee, Merriang and Happy Valley Estates. The scheme was generally unsuccessful, as most holdings were too small to be viable. More than two-thirds of the farms failed. Many holdings were subsequently allotted to adjoining landholders, increasing their viability<sup>24</sup>. Dederang Station was purchased by the Victorian Government after World War II, and broken up into soldier settlement blocks. This scheme was generally successful<sup>25</sup>.



### 3.3.3 DEVELOPING PRIMARY PRODUCTION: GRAZING STOCK

Grazing was the first economic activity undertaken in the post-contact history of the Alpine Shire, and the only economic activity prior to the discovery of gold in the early 1850s. It continues to be a major sector of the agricultural industry within the Shire, and the iconic status of the 'cattlemen of the country' is used as a drawcard in local and regional tourism.

#### The Squatting Era – 1837-60

The squatting era in the Shire began in 1837 when John Hillas took up the Myrtle Creek run, and over the next decade or so runs were taken up over most of the valley areas of the Shire. It would be easy to imagine that when the gold diggers invaded the Ovens valley in the early 1850s, they were also invading established farming areas, but this is far from the case.

The entire area was forested, and stock had free range over the grass available on the valley floors. Carrying capacity was typically estimated at one cow per 25 or 30 acres. The usual improvements were nothing more than a slab or log hut or two and a holding yard, and timber clearance was limited to that necessary to erect huts and yards. The runs were unfenced. Pasture improvement by tree clearance was largely a product of selection, with pressures on stocking rates and development of intensive agriculture. Changes of ownership, re-adjustment of run boundaries and subdivision were characteristic of early squatting runs in all areas of the Shire.

#### *Ovens Valley:*

In the portion of the Ovens valley within the Shire, the runs were often held by individuals or companies with significant (and usually more valuable) land holdings elsewhere. These included John Hillas, William Forlonge, George Faithfull, and William Walker & Co. 'Superintendents' were employed to manage the runs. It was a dead-

end valley piercing into the mountain fastnesses, with no through traffic.

At the northern end, Hillas' run was the only one that experienced significant development in the pre-gold era. In 1844, seven men were employed, and four acres of land had been cleared for wheat. A little over 1100 cattle were being grazed, and a group of crude huts was the hub of the property. Hillas appears to have turned to sheep grazing after this. A figure of almost 13,000 sheep has been quoted for his run in 1852, but the source is not known. Given the limited available land, the apparent absence of infrastructure required to support such numbers (eg large shearing shed & yards), and the large shepherding workforce requirements on an unfenced run, it seems very unlikely<sup>26</sup>. On the outlying runs at the Barwidgee and Happy Valley, few improvements appear to have been made in the pre-gold era.

Thomas Buckland's run was the first taken up in the Upper Ovens, in the early 1840's. He had a small hut and yards built on the east bank of the Ovens, and grazed a few sheep. By 1845, his superintendent Mr Williamson and one stockman were grazing 180 heifers on the west side, in the lower reaches Buckland and Eurobin Creek valleys. William Walker & Company of Sydney took over the Port Punka run on the west bank in that year, and built a new hut and yards for Buckland on the other side of the Ovens, by arrangement with Mr Williamson. They built a new hut and

yards for themselves some distance away from the earlier shepherd's hut on the east side of the river<sup>27</sup>.

By 1849, four crude huts (one abandoned) and two small stockyards (one abandoned) were all that existed on the Ovens River upstream of Hillas' run, and there was no habitation upstream of the Morses Creek junction<sup>28</sup>.

The pioneer squatters in this part of the Ovens valley appear to have left little imprint of their presence, and in the heady gold rushes which followed, they appear to have escaped the notice of the diggers. A description of the Upper Ovens at the start of 1853, as the first vague hints of the golden wealth of the valley were being revealed, paints it as a remote and wild place. Access was described as so difficult and so little known that prospecting parties already in the area would be very difficult to locate<sup>29</sup>. When the first diggers rushed to the Buckland in October 1853, thick scrub at the Buckland River junction was said to have hindered access, and many parties became lost in the upper reaches of the Ovens valley<sup>30</sup>. Descriptions such as these do not tally with a well-established squatting presence.

In the tributary Buffalo River valley, little information has been found about life on the pre-gold pastoral runs. As in other areas of the Shire, there appears to have been little substantial development before the gold era<sup>31</sup>.

#### *Kiewa Valley:*

This portion of the Shire offered a wider valley to the squatters than the tight Ovens valley. Little detail of life in the pre-gold era has been found. The first run taken up, Gundowring in 1838, was the only one which appears to have had significant development undertaken, mirroring Hillas' run in the Ovens. By 1839, seven persons were

residing on the run, seven slab huts had been built, and three acres of land that had been cleared was under cultivation. The run was timbered with stringybark and box<sup>32</sup>.

The Dederang and Tawonga runs further up the valley were probably similar to the Upper Ovens runs, with slab huts, yards and light grazing.

The land was not cleared of timber, and even well after the squatting era, in 1884, only small cropping paddocks had been cleared. In the Tawonga area, these were described as bright green patches within a sea of sombre eucalypts<sup>33</sup>.

#### *Post-Gold:*

Massive growth in regional Victoria from the start of the 'gold-rush' era in 1851 caused new interest in land holdings, even in what were seen as relatively marginal holdings in places such as the narrow upper parts of the Kiewa & Ovens river valleys.

At a local level, this interest was spurred by the development of Beechworth in 1852, followed by the opening of Yackandandah in 1852 and the Ovens valley goldfields in 1853. Squatters found a ready market for stock, in miners moving into Ovens valley from Beechworth. E Chambers from Murrungee run set up an eating house on Myrtle Creek in 1854, supplying meat from his run. Some documentation exists of miners thieving stock in their travels through this part of the valley<sup>34</sup>.

Many run names & boundaries altered during 1850s. Some new runs came into existence, such as Little Portland in 1851 and Altdorf in 1855 in the Ovens valley, and Highlands at Mountain Creek in the Kiewa valley. The large Barwidgee run was subdivided in 1856<sup>35</sup>. The *Nicholson Act* 1860, *Duffy's Land Act* of 1862 and the 1869 *Land Act* ('Poor Man's Act') all

contributed to the progressive break-up of squatting holdings in Shire, and by 1880 most of the runs had been forfeited<sup>36</sup>.

### **Selection – 1860 Onwards**

Cattle grazing continued to be a major feature of the smaller selections, in both the Kiewa & Ovens valleys. By the late 1800s, Myrtleford, Dederang and Tawonga had become the main stock selling centres of the Shire, with auctioneers maintaining saleyards. Sales of principally store cattle were held on a fortnightly or monthly basis<sup>37</sup>. Myrtleford, with the benefit of a railway connection from 1883, had several saleyards over its history<sup>38</sup>, and today has the only operational saleyards in the Shire. The cattle-raising industry in the Shire was greatly assisted by the development of high-country grazing from the late-1800s, which reduced dependence on the limited amount of low-level pasture.

### **High Country Grazing**

#### *Main Divide:*

According to oral tradition, and first published in the 1960s by Stella Carr after interviews with the McNamara family, the beginnings of high country grazing on the Main Divide was in the mid to late 1850s, after early 1850s exploration of the high country by Brown and Wells, stockmen at Cobungra Station<sup>39</sup>. The contemporary documentation and regional dynamics of the era, however, are at odds with this story, and strongly support von Meuller's accounts and a broader mining-led exploration of the high country. High country grazing occurred as the lightly-grazed & unimproved squatting runs and later selections increased stocking rates due to the growth in regional populations. Increased stocking rates subsequently increased graziers' sensitivity to droughts and bushfires<sup>40</sup>.

High country grazing may have begun on the western fringes of the Bogong & Cobungra high plains at the end of the 1850s, and could have extended to some higher areas in the mid-late 1860s. The first high country grazing lease on the Bogong High Plains was granted in 1866, but it was speculative and not grazed. The earliest documented evidence of grazing on the Bogong High Plains is in the early 1870s<sup>41</sup>. The high plains were initially only lightly grazed, by stock from the Kiewa and Ovens valleys, and the Omeo side. As the number of licences increased, so did the stocking rates, but full occupation was not reached until the early 1900s, except for relief grazing in drought times<sup>42</sup>. In 1878, the running of 600 cattle down from the Bogong High Plains rated a mention in a local newspaper. This was the combined herd of the Upper Ovens valley graziers, and the cattle were described as being in splendid condition<sup>43</sup>.

The High Country graziers established a network of huts, yards and tracks throughout the summer pasture areas, grazing cattle and sheep. Grazing of horses was also carried out. In times of severe drought, it was not unusual for large numbers of sheep from distant areas such as the Riverina to be depastured in the Alps. In each of the drought years of 1902/03 and 1914/15, for instance, an estimated 40,000 sheep were depastured in the Bogong and Hotham high country<sup>44</sup>.

The annual running of mobs of cattle to and from the High Country became a feature of twentieth-century life in the valleys of the Shire. As Melbourne-based bushwalking and ski clubs began venturing into the High Country from the 1920s onwards, they came into contact with the cattlemen, and used their huts for shelter. Many of the stories told to the hikers and skiers were repeated in club journals, and

from this, the legends and yarns of the cattlemen grew to become a strong part of the folklore of the region, and a key promotional aspect of tourism. This process was assisted by the Victorian Railways' popular Skyline horseback tours of the 1930s, led by local cattlemen.



Cattlemen on the Bogong High Plains, on horseback tour in 1929 (Victorian Government Tourist Bureau photo. © National Library of Australia)

#### *Mt Buffalo:*

Oral tradition passed through the Weston family of Porepunkah says Thomas Goldie's stock strayed to summit from the Buckland valley in 1840's, via what became known as Goldie's Spur, and summer grazing began<sup>45</sup>. Contemporary documentation indicates very low stocking rates in this era, and the unlikelihood of grazing extending more than a very short distance up the Buckland River and Eurobin Creek.

Grazing on the plateau appears to have begun in the late 1860s, and cattle and sheep were grazed from about 1891 until 1922, when grazing was banned. Illegal grazing continued, and licences were re-introduced in 1938. The Field Naturalists Club of Victoria initiated a campaign against grazing in 1939. This campaign peaked in 1952, and the last licence, granted in 1951, was finally surrendered in 1958, bringing grazing to an end<sup>46</sup>.

#### *Dargo High Plains:*

Grazing on the Dargo High Plains appears to have begun in the 1860s, spurred on by development of nearby goldfields such as Grant and the Upper Dargo. The first grazing run was gazetted in 1866, the Dargo High Plains run of 121,000 acres, held by P Williams<sup>47</sup>. By 1878, several licences were held<sup>48</sup>.

#### **Dairying**

The first mention of dairying and dairy farmers in the Shire is in the Buckland valley in the mid-late 1850s<sup>49</sup>, although even the earliest squatters would have kept milking cows. Dairying in the Shire in the early years was essentially a cottage industry, supplying local demand for butter, cream and milk. Transport difficulties and the lack of refrigeration hindered the development of a larger industry.

In 1889, the Victorian Government introduced bonuses for development of factories producing butter for export, based on the newly-invented mechanical cream separator, and advances in refrigeration. By 1894, butter was the State's third most important export, and by 1905 nearly 200 factories were in operation, principally in Gippsland, South-West, North-East & Central Victoria, and the Goulburn Valley. Many factories were owned co-operatively, and they enabled farmers in the local areas to develop small milking herds, and produce a regular low-level cash flow that carried them through both the normal seasonal troughs of farming, and the lean years<sup>50</sup>.

In this period, expansion of dairying in the Shire mirrored that in other dairying regions. Butter factories were established at Tawonga in 1900<sup>51</sup>, and in Myrtleford in 1903 where it replaced an earlier creamery established 1893<sup>52</sup>. Creameries were built at Gundowring, as a satellite of the Kiewa Butter Factory which had been

established in 1893, and at Running Creek<sup>53</sup>. Key to the success of dairying ventures in the upper valleys was the connection of the railway system to Myrtleford and Bright in 1883 and 1890 respectively, and the road connection from Tawonga to the Bright railhead in 1896. The introduction of small hand and steam separators to the Ovens valley in 1899 provided an impetus to dairying, and by 1905 dairying had also become well-established in the Bright area<sup>54</sup>. Pig farming expanded in dairying areas of the Shire, particularly the Kiewa valley, using the by-products of the factories (skim milk). The first milking machine in the district was installed by J Robson of Tawonga in about 1909<sup>55</sup>.

The advent of reliable motor transport in the 1920s and 30s enabled milk collection from wider areas, and amalgamation and closure of butter factories began throughout the State. The Myrtleford factory operated independently until 1963, when it amalgamated with the Milawa Co-op, creating the Milford Co-op Dairy Co Ltd. Myrtleford operations shut down in 1966<sup>56</sup>.

In the Kiewa valley, butter from Tawonga was taken via Tawonga Gap to Bright, until the road connection to north was upgraded in the 1940s during construction of Kiewa Hydro Electric Scheme. The butter factory at Kiewa had undergone several changes and amalgamations, and had emerged as the leading dairy factory in the area. Operations ceased at Tawonga, and whole milk was collected from local dairy farms three times a week and transported to Kiewa<sup>57</sup>. Pig farming declined.

By 1963, the Kiewa valley had become the most important dairying district in the Upper Murray Region, although the Alpine Shire includes only the southern end of this dairying district. There were nearly 21,000 dairy cows on 348 properties in the Shire of Yackandandah portion of the valley. The Shire of Bright at this time had 77 dairy farms, with nearly 4000 dairy cows<sup>58</sup>. The Kiewa valley is the major centre of dairying in the Shire today, although significant dairy farms still exist in the Ovens valley.

### **3.3.4 DEVELOPING PRIMARY PRODUCTION: DEVELOPING AGRICULTURAL INDUSTRIES**

#### **Farming for Commercial Profit: Working on the Land**

Subsistence cropping, orchard growing, dairying, market gardening, and grain growing (wheat, barley & oats) for local consumption were widely practised in regional Victoria in the era, following the massive expansion of regional populations during the gold rushes. The Ovens valley portion of the Alpine Shire was no different, and the scale of these early endeavours generally reflected the level of local demand. Produce found ready markets in local towns, and regional towns outside the Shire such as Beechworth and Yackandandah.

#### **Early Agriculture, & the Beginnings of Cropping**

The wide variety of cropping and other agricultural pursuits undertaken were very important in determining the suitability of the area for particular crops such tobacco & hops, influencing the future direction of agriculture. Crops such as wheat, first grown as small crops on early squatters' runs and the principal crop in the Ovens valley in the late 1800's (eg 1884 – Bright & district 3332 acres under cultivation with wheat the principal crop<sup>59</sup>), were a product of local requirements of the era, and did not have a significant impact on the development of the Shire. Common crops such as barley, oats, potatoes, peas etc could be regarded similarly.

In the isolated Kiewa valley, the situation was somewhat different. With very small local populations, produce was geared for regional sale, via Yackandandah and Myrtleford until the Tawonga Gap road connection to the Bright railhead was completed in 1896. At the same time, the opening of Glen Wills and the cutting of a Mines Department track to the goldfield via the Big River opened up a new market for the Kiewa valley farmers. Cereal growing was still an important feature of Kiewa valley farming as late as 1930<sup>60</sup>. Subsistence dairying, cropping and pig farming enabled

small land holdings to survive until improved road connections and transport provided suitable access to wider markets, allowing an expansion of the dairying industry to become one of the prominent agricultural industries of the Shire today.

#### **Tobacco**

The Alpine Shire tobacco growing areas and the Mareeba district in North Queensland have contributed the overwhelming bulk of Australia's recent tobacco production. Mareeba's tobacco farms ceased production in 2004, and production in North-East Victoria ceased in 2006. The annual farm-gate value of production from the North-East Victorian fields was estimated at \$27 million in 2004<sup>61</sup>.

The first mention of tobacco cropping, pioneered by Chinese miners, is in the Buckland valley in the 1850s. Similar localised tobacco growing was not unusual in other parts of the State, where rapid expansion of regional populations placed heavy reliance on local produce. The variety grown produced a rough, black tobacco, after drying in long kilns constructed of slabs<sup>62</sup>. The Chinese grew tobacco at many places in the Upper Ovens, and in the Kiewa valley at Tawonga, Dederang and Gundowring<sup>63</sup>. The Kiewa valley tobacco farming was probably stimulated by the opening of a tobacco manufactory at Kergunyah,

just outside the Shire, in 1873<sup>64</sup>. Shortages of imported Virginian tobacco during the years of the American Civil War caused a small boom in demand for the locally grown product.

The climate in the valleys suited tobacco growing, and it was not long before enterprising Europeans began share farming with the Chinese, within the Shire and outside at places like the King Valley. By 1884, Bright and its immediate district had 82 acres under tobacco, cultivated mainly by Chinese and producing 14 tons annually<sup>65</sup>. Tobacco was grown in the Buffalo River from the 1870s, using Chinese labour<sup>66</sup>. Chinese miners at Mitta Mitta would leave their claims for harvesting work in the Ovens valley. Many Chinese tobacco farmers in the region continued to work their own farms. These included the Panlooks and Monshings at Eurobin.



Chinese workers harvesting tobacco, late 1800s (photo © State Library of Victoria)

In 1895, the estimated value of the tobacco crops on the Ovens and Buffalo Rivers was £800-900 and £1000 respectively. At this time, it was claimed that all tobacco farms in the district were worked on the co-operative principle by Europeans who provided the land and Chinese who cultivated the crop<sup>67</sup>.

At the instigation of the Victorian Government, an expert was sent out from the US, arriving in Wangaratta in February 1896. He toured the Ovens

& King valley tobacco farms, recommending introduction of new tobacco varieties, new methods of growing and picking, and abandonment of the long kilns in favour of new, temperature controlled kilns. Action did not immediately follow. However, a government experimental farm was set up in the King Valley in 1897. In 1901, in an attempt to sustain the industry after gluts in production had rendered the local leaf almost unsaleable, the Victorian Government set up a stemmery at Wangaratta, from where surplus production was sent to England.<sup>68</sup> Growing in the State became confined mostly to the Ovens and King valleys, and production fluctuated over the next two decades.

The first experimentation with flue-curing in the State was carried out by the Agricultural Department at Messrs Rae Bros farm at Gapsted in 1912<sup>69</sup>, and the first of the new kilns was built there in 1917, heralding a phase of modernisation<sup>70</sup>. Acreages remained relatively stable in the 1920s. In the 1920s, after the United States restricted immigration in 1924, a number of Italian migrants injected new blood into the industry, share farming before taking up farms at Eurobin and Buffalo River, and beginning the eventual domination of the local industry by farmers of Italian origin<sup>71</sup>. By 1929, it was estimated that about half the landholders on the Buffalo River and the Ovens in the Myrtleford district were growing tobacco<sup>72</sup>.

In 1927, the British-Australasian Tobacco Co made an attempt to stimulate the industry. They offered £50,000 on a £-for-£ basis to the Federal and State governments to assist any area to grow tobacco equal in quality to US tobacco. This, combined with a customs duty that

was increased from 2/- to 5/2d per pound in stages from 1929 to 1931, was a boon to the industry, and substantial plantings were undertaken at Pomonal near Stawell, Shepparton, and some Murray Valley areas. In 1931-32, acreage in Victoria had expanded tenfold on its 1929 size, and the number of growers had risen from 361 to 1980 in the same period<sup>73</sup>. Australia-wide, the number of growers rose from about 700 to over 5000<sup>74</sup>. The industry virtually collapsed with massive overproduction, despite a Local Leaf Content Scheme introduced in 1936. By the end of the decade, customs duty had been lowered and Victorian tobacco growing was again localised to the North East, where only 165 growers survived<sup>75</sup>.

In 1934, experiments in fertiliser, topping, suckering, varieties etc was carried out at Merriang near Myrtleford. In 1939, an experimental station was established at Myrtleford, but WWII broke out, disrupting activities<sup>76</sup>.

Post-WWII Italian migration to the area revitalised the tobacco industry, which boomed in the 1950s and early 1960s. These migrants came from various parts of Italy where intensive agriculture was carried out. They tended to be sponsored or have come out through chain migration rather than with assisted passage, and smaller numbers of Greek, Spanish and Yugoslav migrants also worked in tobacco growing<sup>77</sup>.



Planting out tobacco seedlings in the Ovens Valley, 1955 (photo © National Library of Australia).

The Victorian Government established a tobacco research farm at Ovens in

1951, one of two in Australia. The other was at Mareeba in northern Queensland<sup>78</sup>. A number of improvements in the technologies of picking, kiln curing, cultivation, blue mould control etc, greatly assisted growers.

In 1958, tobacco growing was re-introduced into the upper Kiewa Valley by Jack Sharpe of Bright. Coopers began at Mountain Creek in 1959, and tobacco was also grown at Coral Bank in that year. Graham Cooper went to the United States in 1968 with another grower and a Department of Agriculture official to study the latest curing methods. As a result, the first bulk curing unit (loose-leaf) in Australia was installed at Cooper's farm. Some other growers came to the Kiewa from the Murray district, where post-war tobacco farms had not been successful<sup>79</sup>.

Overproduction in the early 1960s led to a Tobacco Industry Stabilisation Plan in 1965, and production quotas were applied. Funding to the Ovens research station was cut in the early 1980s, and research into alternative crops carried out. The number of growers was also reduced in recent times by buy-back of tobacco quotas. This stimulated diversification into other types of farming, significantly the re-introduction of viticulture to the valleys<sup>80</sup>.

Tobacco growing in the Alpine Shire finally ceased in 2006 following a vote by growers, and with that decision, tobacco growing in Australia came to an end.

## Hops

The Ovens valley and northern Tasmania are the only commercial hop growing regions in Australia, with the Ovens valley contributing about one quarter of the nation's production.



Experiments in hop growing had been undertaken in the first years of the Colony of New South Wales, but were unsuccessful. Tasmania slowly developed a hop industry in the first half of the nineteenth century, and Victorian growing began at Bairnsdale in 1866<sup>81</sup>.

Commercial hop growing in the Shire was pioneered by William Bunn of Freeburgh, who planted a successful trial crop in 1868. In 1869, he cleared and planted 2 acres<sup>82</sup>. In 1871 or 72, William Masterton planted one acre of hops in the Buffalo River valley, and had expanded this to two acres by 1877<sup>83</sup>. William Hooper of Porepunkah planted hops in 1872, and in 1874, Bunn planted 18 acres of land for William McLean at Porepunkah. Chinese labour was then employed to work the farm. These farms enabled McLean & Hooper to start the Bright Brewery in 1876. The hops were cured in oast houses, which were brick-lined weatherboard buildings with a furnace underneath<sup>84</sup>.

Victorian hop growing expanded rapidly in the 1870s and early 1880s, outstripping Tasmania. New hop gardens developed at Harrietville, Freeburgh, Barwidgee, Happy Valley, Buckland Valley, Buffalo Valley and Wandiligong. Donald Gow at Harrietville employed 90 pickers in 1883. But surplus production in 1884 caused a partial collapse in the Victorian industry, and depression in brewing in the late 1880s inhibited recovery, despite an imposition of an 8d per pound import duty on hops in 1891<sup>85</sup>.

By 1885, Bright and district (covering all areas of the Ovens valley within the Alpine Shire) had 227 acres under

hops, the third highest area in the colony, and its 29 growers produced 1554 hundredweight, the fourth highest yield in the colony behind Bairnsdale, Tambo and Oxley (Everton). At this time, the broader Tambo district (including Bairnsdale) and the broader Ovens valley dominated hops production in Victoria, providing nearly 80% of the total crop of 14,053 cwt<sup>86</sup>. From 1895 onwards, production from Bairnsdale/Tambo plummeted because of ongoing problems with the climate and inferior hop varieties, and the Ovens and King valleys of north-east Victoria dominated hop growing in the State. Bairnsdale/Tambo had virtually finished growing by 1917<sup>87</sup>.

By 1890, hops were considered to be one of the leading agricultural pursuits of the district, and 'Annual Hop-pickers' Balls' held at Bright and Germantown were mentioned in March of that year<sup>88</sup>. In the 1890s, Gow at Harrietville was the largest grower in the valley, but the four Panlook brothers at Eurobin were embarking on an ambitious program of expansion. The Panlooks were the sons of a Buckland valley storekeeper and gold-buyer, William Panlook, who had come from China seeking his fortune on the goldfields. The family had moved from the area, but the four sons returned in 1890, and after working on Ah Sue's farm at Eurobin for three years, pooled their resources and bought the property. They purchased more adjoining land, grazing dairy and beef cattle, and planting tobacco and hops. While Gow ceased growing hops in 1922, Panlooks continued, increasing their hop acreage dramatically in the 1930s after an over-supply in 1932 had forced many small growers out of the industry<sup>89</sup>.



Panlooks' hop farm at Eurobin, 1958 (photo © State Library of Victoria)

However, their existing kilns, irrigation equipment and other facilities were inadequate, so the brothers formed a company to raise capital for their upgrades. The Henry Jones Co, heavily involved in Tasmanian hop growing, became a major shareholder, and seventy acres of hops was under cultivation by 1942-43<sup>90</sup>. By the early 1970s, Panlooks' Rostrevor Estate property had become the largest hop farm in Australia, with 170 acres under cultivation. In the 1970s, Carlton & United Breweries established a hop research farm adjacent to Rostrevor, testing varieties, fertilisers, pest & disease control etc<sup>91</sup>.

Nearby, the O'Sullivan's, who had grown small acreages of hops since the 1890s, resumed cultivation on 3 acres in 1940. Daniel O'Sullivan introduced the first mechanical picker into the district in 1960, and following a trip to hop-growing areas overseas, a revolutionary new combination dryer and baler in 1966. By the early 1970s, O'Sullivan's hops had been expanded to 65 acres, but was scaled back in subsequent decades<sup>92</sup>. Other large hop-farms exist in the Merriang area near Myrtleford.

Hops were briefly introduced to the Kiewa valley in about 1960, at Running Creek/Kancoona, but the venture was not a success<sup>93</sup>. A similar, more recent attempt to re-introduce hops to Wandiligong was also a failure<sup>94</sup>.

## Apples

It is likely that apple trees were planted in the gardens of some of the early squatting runs in the Shire, and they were certainly present in many of the small orchards and home gardens in and around the early goldfields townships and selections of the Shire. Places such as Wandiligong were well known for their horticulture. Apple trees were also planted on dredge tailings at Bright in about 1905<sup>95</sup>. Larger-scale commercial growing in the Shire began at Wandiligong with an orchard planted by Ern Young around World War I. Several other growers subsequently planted apple orchards at Wandiligong<sup>96</sup>.

The Nightingale brothers purchased Young's orchard in 1954, and with a series of acquisitions, expanded their operations to become the largest apple orchard in the region. Their orchards cover a large geographic area, including holdings at Stanley, the Buckland valley and southern New South Wales.

## Vineyards

Vineyards have recently been re-introduced into the Ovens and Kiewa valleys of the Shire, following a long absence due to the spread of Phylloxera, an aphid which attacks the roots of vines. However, the suitability of the sheltered, fertile valleys for grape growing had been proven at an early period of the post-contact history in the Shire.

The first mention of grapes in the Shire is 8½ acres of English grapes planted on the Mullindolingong run in the Kiewa valley in the 1850s<sup>97</sup>. The early vineyards in the Ovens valley were pioneered by European migrants. These included the 1860s vineyards of Holstein at Freeburgh and Blumner at Bright, both German migrants who were attracted to the area by gold. A Bulgarian miner, Antonio Yackovitz

(Anton Gracovitz), who had planted Blumner's vines, also established a small vineyard at this time at Wandiligong<sup>98</sup>.

While Holstein's vineyards had ceased operation by the 1880s, Blumner continued to make wine until the early 1900s, and won several awards at Agricultural Society of Victoria Shows<sup>99</sup>. In 1883, he had a bumper crop, realising 800 gallons per acre from his tokay and shiraz grapes. In 1889, his wines were advertised at 10 to 14/- per dozen bottles. John Bunn had a vineyard and wineshop at Germantown in the 1880s<sup>100</sup>, and a Mr Giotti operated an extensive vineyard and winery near Mudgegonga in the late 1800s<sup>101</sup>.

In the modern era, the cut-back in tobacco quotas and subsequent diversification of former tobacco farms has been an important factor in the re-emergence of viticulture in the Shire.

### **Nut farming**

The Alpine Shire is a significant Australian nut-producing area. Today, 70% to 80% of Australian chestnut production comes from the Alpine Shire and adjacent areas in Indigo Shire, with minor production from other Australian States<sup>102</sup>. The Bright and Wandiligong areas were major Victorian hazelnut producers, but production dropped in the 1950s and 60s as some groves were replaced with tobacco crops. This was partly redressed with trial plantings at Myrtleford in the 1980s, as part of a wider campaign to increase acreage in the State<sup>103</sup>. The Ovens valley was the largest walnut producer in the State until recent years.

A variety of nuts were grown at various places in the Ovens valley portion of the Shire from the early mining days. Lardi's orchards at Wandiligong included walnut and hazelnut trees,

and chestnuts were first planted in Wandiligong in 1879, by E Carlile<sup>104</sup>.

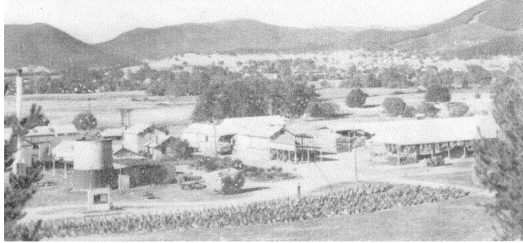
Commercial growing on a large scale began in the 1880s with Abraham White's nuttery at Wandiligong. By 1914, he was producing large quantities of walnuts, chestnuts, hazelnuts (filberts) and almonds, which were packed in hessian bags and sent off by rail<sup>105</sup>. Walnut trees were planted on dredge tailings at Bright in about 1905<sup>106</sup>. Nut growing became a thriving industry during and after World War I. In 1914, E C Dyason, a Bendigo mining magnate and a keen advocate of skiing at Mt Hotham in the 1920s, planted 1500 walnut trees on Morses Creek, and A J Showers planted 500 walnut trees at Bright<sup>107</sup>. Walnuts were also grown at Tawonga South<sup>108</sup>. The Weston family, who had brought walnut trees into the district in the very early years, began a walnut grove at Eurobin in the 1930s. Another significant venture was started by Showers at German Creek.

Schlapp's walnut farm was started near Gapsted in 1943. The two Schlapp brothers visited the US, and returned with the superior Jewel and Franquette varieties. These were propagated and sold to the established nut farms higher up the valley. The Schlapp farm was the largest walnut grove in Australia until recent years<sup>109</sup>.

### **Flax**

Flax was briefly a very important crop in the Ovens valley portion of the Shire in the mid 20th century. Abundant native flax plants were noted by Hume & Hovell at their crossing point of the Ovens River in 1824. The first record of flax growing in the Shire dates to the late 1850s, when it was being cultivated by Chinese in the Buckland valley. In 1896, C Monaghan had 56 acres of flax and hemp planted at Brookside in the Buckland valley. The Ovens Valley was one of only a few

Victorian localities where flax was grown commercially. In 1937, E Lewis of Myrtleford grew a trial crop in response to a request from Flax Fibres P/L, and the results were excellent<sup>110</sup>.



Myrtleford Flax Mill, 1954 (photo courtesy Myrtleford & District Historical Society)

As a known flax-producing area, the Ovens valley was a target for expansion of the industry when large supplies were needed for war requirements during World War 2. The Commonwealth Government took control of the industry, because of drastic shortages of this vital product caused by the war in Europe and sanctions against traditional suppliers such as Italy. Great Britain, also denied access to supply, requested that an additional, substantial acreage of flax be planted on their behalf<sup>111</sup>.

Myrtleford farmers were told that 1200 acres needed to be grown in their area in 1940. With positive responses, a 20-acre flax mill site was purchased at Merriang, and a mill and pumping station completed by the end of the year. This was one of 40 such mills and deseeding stations established around Australia at this time. Output for the following few years was less than anticipated, and with shortages continuing and under government pressure, the new Public Park in Myrtleford was levelled and sown to flax. This was harvested by 135 Italians from the Whorouly internment camp<sup>112</sup>. The supply situation stabilised after the war, with imports available that local growers could not compete with. By 1947 only thirteen mills still operated in Australia. This

was reduced to eight by 1956, with six in Victoria. Spinning mills in Melbourne purchased the Myrtleford mill as insurance against national emergency, and the operation was subsidised by the State government. By 1963, only the Myrtleford and Boyup Brook, WA, mills were still active<sup>113</sup>. Eventually in 1965, both mills closed, ending the flax growing industry in Australia<sup>114</sup>.

### **Character of the Alpine Shire farms**

The early squatting runs were not substantially developed, and the infrastructure installed was generally minimal and not sufficiently robust to survive to the present day. The few substantial homesteads in the Shire that were constructed later, on Pre-Emptive Rights (eg Merriang), were generally built with the proceeds from multiple holdings. The early selectors' houses were modest, because nineteenth-century farming in the Ovens and Kiewa valleys was usually at a subsistence level, on small holdings.

In the Kiewa Valley today, the farmhouses are principally modest dwellings from the early to mid-1900s, as the earlier rough cottages needed replacing and farming gradually intensified with greater access to markets. Some relate to further subdivision of farms (eg post-World War II soldier settlement blocks near Dederang). Mid-twentieth century, concrete-block dairies (milking sheds) are the most common and characteristic farm buildings along the Kiewa Valley Highway, until relatively-modern tobacco sheds are reached at Tawonga South.

The Ovens valley reflects some of the broader Kiewa valley characteristics, but is more influenced by the twentieth-century growth of the tobacco industry. Today, tall tobacco kilns clad in corrugated iron are the

most visible and characteristic farm buildings along the Great Alpine Road, from north of Myrtleford to south of Smoko. Some farms, especially in the Myrtleford area, show evidence of the

lucrative and rapid expansion of tobacco growing in modern times, with substantial modern houses and large farm buildings.

### 3.3.5 SURVEYING THE CONTINENT: LOOKING FOR PRECIOUS METALS

The rich gold discoveries in Central Victoria in 1851 turned the young Colony of Victoria's attentions to the yellow metal, and further discoveries in most parts of the Colony followed rapidly. Early gold exploration and discovery within the area of the Alpine Shire is not well recorded, and no rewards were paid for any discoveries. However, prospectors opened up the upper valleys and mountain areas of the Shire, and were the vanguard of all the significant mining enterprise that followed within the Shire.

The following rough chronology illustrates the broader patterns of the progression of gold discoveries through the Shire, and region.<sup>115</sup>

- Beechworth: Gold was discovered in early 1852, and subsequent rushes brought large populations into the region. The Omeo goldfield on the other side of the Divide was discovered at the end of 1851.
- Many new gold discoveries followed, with miners moving out of Beechworth into the surrounding districts. Traffic between Beechworth and Omeo via the high country began from 1852, and Government officials attempted to blaze tracks over Mt Hotham in 1852 and 1854.
- The first mention of prospecting in the Alpine Shire area was April 1852, when a party of Turon miners was leaving Wangaratta for the "Buffalo and Snowy Mountains", and there were hints that this party had found gold there before.
- Gold was discovered in the Cobungra River early in 1852, from the Gippsland side, by Dr Hedley of Port Albert. This followed on from discoveries at Omeo. It is not known if first discovery was in Shire. The upper river, within the Alpine Shire, was rushed in 1859.
- John de Bromley was reputed to have found gold-bearing reef at Harrietville in 1852. This is a long-standing oral tradition in the area, but its reliability is not known.
- 1853: In January, the Ovens River, up to the sources of its tributary creeks, was recognised as auriferous. 'A considerable number of miners' were said to be at work in the gullies of the Buffalo Ranges. A prospecting party was leaving Beechworth for tour of inspection into the ranges<sup>116</sup>. Sometime between August and October 1853, Pardoe & party discovered rich Buckland River field, leading to a rush of some 6000 to 8000 diggers in late 1853. In October, prospecting was being carried out at Happy Valley Ck, and between that creek and Barwidgee Creek. In November, a party from Beechworth prospected up the Buffalo River to the head of the King River. Some poor gold was later worked in patches along the upper reaches of the Buffalo River.
- 1854: In January, gold was being worked in vicinity of Bright<sup>117</sup>. In March, the first mention of workings in vicinity of Wandiligong (Growlers Creek) were made<sup>118</sup>. In July, Riley's (Reform) Reef discovery was reported. In October, a new field was reported on the Ovens River, 14 miles above the junction of the Buckland River. Diggers were traversing Ovens valley, going from the Buckland to Omeo. The Upper Dargo was said to have

been first prospected, by Bloomfield & party.

- 1856: In January, 2000 diggers rushed to Happy Valley Creek. The Bluebell Reef, above what became Palmerston, or Gapsted, was discovered.
- 1857: A new goldfield was reported on the Buffalo River.
- 1860s: In 1860-61, gold was discovered at Running Creek, but Dixon & party were unsuccessful in claiming a reward. In 1860, Howitt found abandoned alluvial workings in the Upper Dargo, possibly those of Bloomfield. In 1862, gold was discovered and worked near Mt Fainter. In 1863 the Upper Dargo was rushed after new discoveries. In 1865, a report circulated of gold being found along the Kiewa River for 30 miles upwards of Gundowring Station.
- 1884: The Tawonga reefs (Tawonga Goldfield) were discovered.
- Late-1800s: Government-sponsored Prospecting Associations are formed (eg Harrierville Prospecting Association), and mining tracks are cut by the Mines Department to facilitate access to remote fields and to stimulate prospecting.
- 1940: The Red Robin Reef was found near Mt Loch, precipitating speculative pegging out of the Hotham Heights Goldfield, perhaps the last gold-rush in Victoria

### 3.3.6 UTILISING NATURAL RESOURCES: MINING

In just 10 years from the discovery of gold in 1851, the fledgling Colony of Victoria was turned from essentially a rural backwater into the most powerful and populous colony in Australia. The impact of gold in regional Victoria was enormous, overlaying the sparse squatting occupation of the land with a robust network of towns, roads and farms.

Mining for gold has been an important historical theme in the development of the Alpine Shire, and was the most important economic driver in the second half of the nineteenth century. While production has been significant in State terms (conservatively about 2½ million ounces), the impact of gold went far beyond simple value of production. In the post contact era, gold brought the first significant non-indigenous populations into the area, resulting in township formation in the Ovens valley, and rapid intensification of agriculture to supply the goldfields population. From a population of no more than a few score at the start of 1852, the number of people within the area of the Shire rose briefly to as many as 8000 at the end of 1853, as diggers poured into the Buckland valley, and formed camps along the Ovens River.

The use of Miners Right privileges to take up land for residences and for subsistence agriculture was pivotal to early township and intensive agricultural development within the Shire. At a State level, the massive boost in population led to concerted campaigns to loosen the grip of squatters on the land. The resulting land selection Acts from 1860 onwards had a great impact on the Shire, as they also did throughout regional Victoria. The miners from the Alpine Shire goldfields also played a significant part in the subsequent opening up of other goldfields in the mountains of Eastern Victoria, such as the Upper Goulburn and Crooked River fields.

#### Alluvial Gold Mining

Alluvial gold mining was very important in the history of the Shire because it brought the first substantial European populations to the valleys. The area was known for its rich diggings initially, and later for its reliability in yield. The total production from alluvial gold mining in the Shire is not known, but is very substantial.

The first significant alluvial rush occurred late in 1853, when some 6000 to 8000 miners rushed the rich alluvial gold fields in the Buckland valley, and others formed camps along diggings on the Ovens River. In February 1854, it was estimated that half the regional population of 10,000 people were in the Buckland valley<sup>119</sup>. In that month alone, about 10,000

ounces of gold was sent by gold escort from the Buckland goldfield<sup>120</sup>. This early gold from Buckland valley was included in the broader Ovens Goldfield (Beechworth) returns. The earliest alluvial mining in the Buckland was in the bed of the river, which was successively dammed and pumped dry, using California pumps<sup>121</sup>. Californian miners quickly introduced the bank sluicing method, enabled ground to be more quickly processed<sup>122</sup>.

The Buckland field became known as “The Valley of the Shadow of Death” following a devastating outbreak of Colonial Fever, or typhoid, in 1854, brought on by poor sanitary conditions. As many as a 1000 people were estimated to have died<sup>123</sup>.



Chinese miners, who had drifted into the valleys of the Shire from the mid-1850s, were in possession of most of the alluvial ground in the upper parts of the Ovens valley by the late-1850s. Riots occurred in 1857 in the Buckland valley, where anti-Chinese sentiment had been simmering. In an event known as the Buckland Riots, some 2000 to 2500 Chinese miners were driven from valley, and their camps looted and burnt. Many violent incidents including bashings were reported, and some deaths in the days that followed. Robert O'Hara Burke, later of Burke & Wills fame, led a police contingent from Beechworth to restore order in the valley. The affray was widely reported around Australia, and forced the Victorian Government to amend Chinese immigration laws. The Buckland Riots was the first large-scale anti-Chinese incident in Australia, and is today widely regarded as the first landmark event in the long road that led to the White Australia Policy of the Federation era<sup>124</sup>.

A small anti-Chinese riot occurred in Moses Creek (Bright) in 1859, on diggings behind the Star Hotel. One Chinese miner was killed and another severely beaten in this incident, which became known as the Moses Creek Riots<sup>125</sup>. Action followed, with the setting up of a designated Chinese camp in the town<sup>126</sup>.

In the mid to late 1800s, riverbanks and terraces in many areas of the Ovens valley were sluiced over long distances, principally by Chinese miners. The Ovens River has been worked at Myrtleford and extensively worked from Eurobin to Smoko, and from Harrietville along both branches to its sources. Tributary creeks extensively worked include Stoney Creek, Barwidgee Creek, Happy Valley Creek, the Buckland River and its East and West branches, Moses Creek to its headwaters, and Growlers Creek.

On the Gippsland fall, the Upper Dargo and Cobungra Rivers were extensively worked, and some tributaries within the Shire such as 25-Mile and 18-Mile creeks. Smaller diggings were undertaken on many streams, including Back Creek, Buffalo Creek, Buffalo River, Slaughteryard Creek, Devils Creek, German Creek, Snowy Creek, and the Cobungra River<sup>127</sup>.

In the Kiewa valley the resources were poorer and more limited. The only significant workings were at Mt Fainter in the headwaters of the Pretty Valley stream. These were opened in 1862, and rushed again in the 1880s. Small patches of diggings are known at Deep Creek, and the lower reaches of the West Kiewa valley and Running Creek.

Early mining had a big influence in opening up the High Country. Miners travelling between goldfields from the early 1850s provided the first regular experience of the High Country for Europeans. In the early 1860s, foot and horse traffic over the high country between Omeo, the Ovens valley and Dargo was well established, and workings on Mt Fainter alluvial goldfield and the Brandy Creek field in the early 1860s probably represent the first regular European habitation of the high country. By the mid-1860s a number of wayside shanties had been built. In the Alpine Shire, on the main Harrietville to Omeo link, these places included Polly Corbett's at Corbett's Flat, Mother Morrell's at Mt St Bernard, and Mother Johnson's at Paw Paw Plain. Mother Freezeout's and Mother Fraser's (or the Fat Woman's) were on the Dargo road. Later in the 1860s, the graziers of the Ovens and Kiewa valleys, and the Omeo area, used the tracks pioneered by the miners to bring the first stock onto the high plains for summer grazing. Whether any of the early mining tracks used earlier Aboriginal pathways into the Alps is not known<sup>128</sup>.



Small-scale alluvial mining at Harrietville, c1900 - note sluice-box and cradle in foreground (Foxcroft photo from postcard in R Kaufman collection)

As alluvial mining on the major fields of the Shire declined in the 1860s, those towns which were not able to successfully convert to reef mining suffered, and those that could prospered. Hence the Buckland valley townships went into a long, slow decline, while places such as Myrtleford, Bright, Wandiligong and Harrietville entered phases of consolidation. Alluvial mining was revived with some success during the later phases of large-scale hydraulic sluicing and bucket dredging, which are discussed separately. Small-scale alluvial mining on an individual or small-party basis continued well into the twentieth century.

### Reef Gold Mining

As in other parts of the State, reef mining was important because it stabilised the early townships. Mining in hard rock required capital for plant and equipment, and provided a considerable amount of employment on wages. Ancillary activities such as blacksmithing, timber getting and carrying were also needed to support the industry.

The total Shire production from this form of gold mining is not precisely known. The recorded production is about 600,000 ounces of gold, but yields from a large number of mines were not recorded. A fair estimate of total reef production would be between  $\frac{3}{4}$  and 1 million ounces of gold, making

the Alpine Shire's reefing fields easily the highest producing in eastern Victoria, outside the Walhalla-Woods point belt<sup>129</sup>.

The reefing fields of the Shire were characterised by a large number of relatively small orebodies, many suiting work by individuals or small syndicates. As in other mountainous areas, the quartz reefs were generally worked with horizontal tunnels, called adits, rather than vertical shafts. Despite the dead-work of driving tunnels into the hills, this afforded economies of scale by more than offsetting the capital and operational costs of expensive winching machinery and poppetheads.

Despite the eventual dominance of the Upper Ovens reef mining industry at Wandiligong and Harrietville, Myrtleford (Myrtle Creek) led the way in quartz mining in the Shire. The first reef was discovered in 1854 (Riley's Reef, later the Reform Reef)<sup>130</sup>, another rich reef in 1855<sup>131</sup> and machinery was installed in 1856<sup>132</sup>. In November 1858, at a time when the very first reefs in the Upper Ovens were being opened, 270 persons were employed in mining at Myrtle Creek, mostly on wages. Mackay & Co's water-driven stamp mill and a steam-driven Chilean mill were operating<sup>133</sup>, and many new reef discoveries were being made. These included reefs at Gapsted, then known as Quartz Reef, which supported a population of several hundred people at its peak. Many other reefs were opened in the Barwidgee valley, at places such as Waterloo<sup>134</sup>.

These reefs were pivotal in the early development of the township, and an important part of the local economy for the rest of the 19th century, and into the early 20th century. The principal producer at Myrtleford was the Reform Reef, with a recorded production of

over 20,000 ounces valued at more than £80,000. In the mid-1880s it was still employing 40 men on wages<sup>135</sup>, and the closure of this mine in 1888 cast a pall over the town<sup>136</sup>.

The first reefs in the Upper Ovens were opened in the Buckland River in 1858, with the discovery of the Nelson & Alta reefs<sup>137</sup>. Numerous quartz reefs were opened in Buckland, but these did not match the richness of the alluvial field.

The first reefs at Wandiligong and Bright were opened in 1858-59. An early rich reef was Oriental at Wandiligong, which went on to record a production about 60,000 ounces of gold, with an estimated production of 84,000 ounces. This mine produced nearly 16,000 ounces in 1861<sup>138</sup>, and was pivotal in the conversion of a small alluvial mining camp into the Wandiligong (Growlers Creek) township. The Pioneer reef at Bright was similarly influential. This early discovery, worked intermittently into the 1900s, had an estimated production of over 20,000 ounces of gold.

Hundreds of reefs were rapidly opened at Wandiligong, and along the Ovens River to Harrietville. Germantown, Freeburgh, Woolshed Flat and Smoko boomed on the opening of quartz reefs on the western hillsides of the Ovens valley.

Hundreds of reefs were also opened at Harrietville, from 1860. An early rich reef was Rose, Thistle & Shamrock, so named for the English, Scots and Irish origins of its discoverers. It remained a good producer until it finally closed in the 1930s, and during the mining-depressed 1920s it was one of the highest producers in the State. It had the highest recorded production of any mine in the Shire - nearly 80,000 ounces of gold. Other good producers were the Sambas with 45,000 ounces

from 1910 onwards, and the United Miners with 25,000 ounces from 1860 to 1874. Harrietville had a very active Prospecting Association, and the Shire's only School of Mines, started in the 1890s as English capital was introduced to stimulate the local reefing industry. This capital resulted in about 30,000 ounces of gold being produced by the English companies at Harrietville for that decade, at a time when reef mining elsewhere in the Shire was in the doldrums<sup>139</sup>.



Rose, Thistle & Shamrock Mine battery shed (crushing plant), Harrietville (postcard photo from R Kaufman collection)

In the early years of reefing in the Shire, capital was difficult to obtain. John A Wallace was a very influential figure in North-East Victoria in the mid to late 1800s. He rose from a humble start as a digger at Beechworth to create a sprawling business empire encompassing stores, hotels and mines, and went on to a successful political career in the Upper House of the Victorian Parliament. His investment in Alpine Shire reef mining and prospecting was substantial, and his capital was particularly critical in the early development of the Bright and Wandiligong reefs. At various times, he had a large stake in all of the biggest reef mines in the Shire, including the Reform, Happy Valley, Pioneer, Oriental and Rose, Thistle & Shamrock. His other business investment in the Shire was also substantial, and included hotels and stores<sup>140</sup>.

Reefs in the Upper Dargo were opened from the mid-1860s, but generally proved disappointing. Several batteries were set up to crush the stone<sup>141</sup>. One of the early characters of this field, Louis Hanckar, went on to play a significant role in the development of New Caledonia's world-class nickel fields.

In 1860-61, reefs were opened at Running Creek (Havilah). The largest of these was the Happy Valley reef, with a recorded production of over 30,000 ounces of gold between 1866 and 1883. A large number of small reefs were opened up in Back Creek, a tributary of the Buffalo River, and Buffalo Creek in the 1860s, and worked on a small scale into the 1900s. Later crushings from these mines were centralised at Paul's battery, on Back Creek. Reefs were also worked on Merriang Station<sup>142</sup>.

In the Kiewa valley, the Tawonga reefs were discovered in the 1880s, but their development was slow. Sixty men were at work on the field in the early 1890s, and a crushing plant was installed<sup>143</sup>. An unsuccessful attempt to revive the Tawonga mine was made in the late 1940s<sup>144</sup>.

Reef mining declined in most areas of the Shire from the 1880s, as orebodies were exhausted or the economics of extraction deteriorated. In the Bright-Wandiligong-Freeburgh area, recorded production had been falling since the peak years of the 1860s, and dropped from 34,000 ounces in the 1870s to just over 14,000 in the 1880s. Bright was well-situated in the main valley, and geared itself to diversify its economic base into tourism and agriculture<sup>145</sup>. Wandiligong did not have these advantages, and went into decline<sup>146</sup>. Myrtleford was central to a large agricultural district, including the Ovens, Buffalo and Barwidgee Creek valleys, and was able to successfully

shift its economic base over time<sup>147</sup>. However, small-scale mines did continue to operate in these reefing areas until modern times.

Harrierville was different in that it retained its mining base through the survival of key existing mines such as the Shamrock, and the discovery of new reefs such as the Sambas in the twentieth century. It remained very much a mining town until the closure of the Tronoh Dredge in the 1950s<sup>148</sup>.

Probably the last two significant reef discoveries in the Shire were the Williams United at Wandiligong in 1934, and the very rich Red Robin reef near Mt Loch in 1940. The first crushings from the latter yielded 173 ounces of gold from two tons of quartz, causing nationwide publicity and speculative pegging of a large area of the high country<sup>149</sup>. This rush to the newly-proclaimed Hotham Heights Goldfield was perhaps the last 'gold-rush' in Victoria. However, no other significant finds were made in the area.

The Sambas, Red Robin and Williams United mines have operated into the modern era. Indeed, there was a minor reef mining revival in Upper Ovens in 1980s. At one time in the late-1980s, six mines were operating with crushing plants, and 35 persons were employed, most on wages. The Williams United at Wandiligong produced in excess of 10,000 ounces in a decade<sup>150</sup>.

### **Hydraulic Sluicing**

Hydraulic sluicing, the use of high-pressure water to break down banks of gold-bearing earth, was widely practised in the alluvial goldfields of eastern Victoria, because of the availability of abundant water and high hydraulic heads. The best expressions of its use in the State exist in eastern Victorian goldfields such as Yackandandah, the Upper Ovens, Omeo, Mitta Mitta and Beechworth.

Hydraulic sluicing was first developed on the American goldfields, and introduced into Australia in the mid-late 1850s. Its first use in the Shire was about 1858 in the Buckland valley<sup>151</sup>, and by 1859 it was coming extensively into use<sup>152</sup>. In 1861, 17 hydraulic nozzles were employed in the Buckland Division<sup>153</sup>. This earlier technology employed water fed to the working face by canvas hose, limiting both the pressure and volume of water that could be used.



Hydraulic sluicing at Harrietville, c1900 (photo courtesy Harrietville Historical Society)

Later in the century, iron piping was used, meaning that higher pressures and volumes could be obtained, and larger water cannons (monitors, or 'giants') used. Several large companies were formed to hydraulic sluice remnant high terraces, principally on the Buckland River and the Ovens River near Harrietville. Examples included the New Zealand Hydraulic Co at Harrietville, and the Buffalo Hydraulic Sluicing Co in the Buckland valley<sup>154</sup>. Large-scale hydraulic sluicing was also carried out in the High Country, on sub-basaltic deep leads such as Brandy Creek from the 1880s<sup>155</sup>.

In late 1899, the Golden Belt Dredging Co began operations at Barwidgee Creek, using an hydraulic barge<sup>156</sup>. This is the only known use of this technology in the Shire, although it was used to great effect in what is now the adjoining Indigo Shire, particularly

in the lower reaches of Yackandandah Creek in the 1890s and early 1900s<sup>157</sup>.

Large-scale hydraulic mining impacted on many river diggings in the Shire. Large quantities of soil were discharged to the rivers, and complaints from downstream users were common, wherever in Victoria it was practised. The bucket dredging which followed was sufficient to convince the Government that action was required to address the sludge problem.

### Bucket Dredging

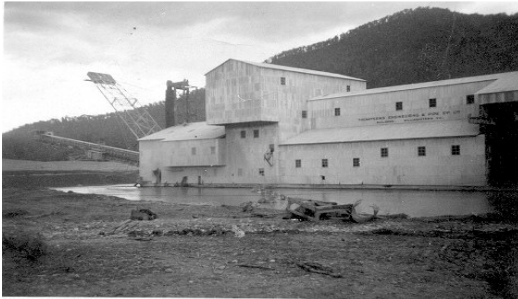
The Alpine Shire contains the most heavily dredged areas in Victoria<sup>158</sup>, and Australia. The Ovens valley dredging industry in the period 1900 to 1920 was unparalleled in the nation, and for a short time enabled the annual gold production from the Bright district to rise to second in Victoria, behind Bendigo<sup>159</sup>. Nearly 60 bucket dredges worked the valley floors of the Shire between 1900 and 1955, producing more than half a million ounces of gold. The largest dredge by far ever to work in Australia, and one of the largest in the world at the time, was constructed at Harrietville in 1942. The Tronoh or Mammoth Dredge weighed over 5000 tons, and had a design digging depth of 130 feet. It worked until 1954, producing about 54,000 ounces of gold<sup>160</sup>.

The technology was introduced from the goldfields of New Zealand, and many New Zealand engineers and dredgemasters came to the Ovens valley to assist. The *Alpine Observer* carried many articles on dredging prior to its introduction, essentially propaganda to sway community attitudes<sup>161</sup>.

The first bucket dredging operation was begun by the Ovens & Buckland Co at Eurobin in May 1900<sup>162</sup>, and many others quickly followed. While most dredges operated upstream of

Eurobin on the Ovens River, Buckland River and Morses Creek<sup>163</sup>, several early dredges operated near Myrtleford, and one at Running Creek<sup>164</sup>. The last of the early dredges finished operations in 1921, and all later dredging occurred in areas upstream of Bright.

A small dredge operated at Wandiligong in the 1920s, and two larger, more modern steel dredges were launched on the Ovens in the 1930s, one at Bright and one at Smoko. The Freeburgh Dredge was launched in 1940, and the largest of all, the Tronoh at Harrietville, in 1942<sup>165</sup>. The Tronoh operations were a test case for the industry, and hopes were held that its success would herald a new age of giant, deep-digging dredges in the State. It failed, as did the dredging industry in Victoria<sup>166</sup>.



The Tronoh Dredge at Harrietville, c.1950 (photo: A Kennedy collection, per R Kaufman)

Dredging was a two-edged sword, and much has been written about its impacts. Land degradation and downstream water quality were big issues, and the effects of Ovens valley dredging played a key role in the formation of Victoria's first environmental watch-dog in 1905, the Sludge Abatement Board<sup>167</sup>. Dredging also produced perhaps the State's first organised, broad-based environmental action groups, protesting at pollution of the rivers and degradation of prime agricultural land<sup>168</sup>. Curiously, the first Anti-Dredging League was formed at

Tawonga in 1901, by farmers reacting to speculative pegging of dredging leases in the Kiewa valley<sup>169</sup>. However, this first League should not be considered in the same terms as the later Ovens Valley organisations, the Ovens Valley Farmers' Land Protection League (Anti-Dredging League) and the Ovens River Anti-Sludge Pollution Association which were formed in 1907 in Myrtleford and Wangaratta<sup>170</sup>. The latter groups were reacting to real and on-going environmental issues within the valley.

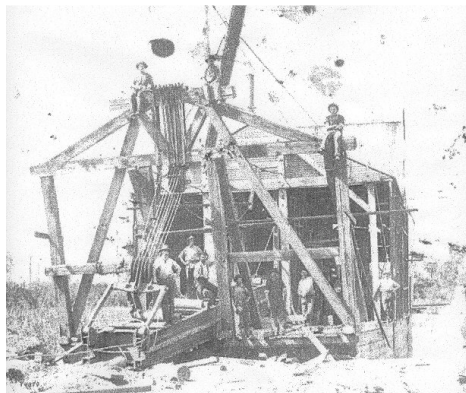
Contrary to popular belief, only a relatively small percentage of prime agricultural land was dredged – most was previously worked land, in very poor condition and unfit for agriculture. Community action and strong lobbying from farmers in the lower reaches of the Ovens valley did limit the extent of available dredging land. It is a cherished local belief that this action saved the fertile Ovens valley from despoliation<sup>171</sup>. However, an examination of dredging returns indicates that the best yields were obtained from areas that were intensively worked for shallow alluvials in the early years of alluvial mining, and the transition to unworked ground generally saw yields drop. A comparatively small amount of agricultural land was lost. The truth probably lies halfway between the stated ambitions of the dredging companies, and the beliefs of the downstream communities. Doubtless much valuable land was saved, but ultimately the gold resources of the lower valley were very unlikely to sustain dredging on a blanket scale.

Dredging had its greatest impact in the Upper Ovens, revitalising the townships by providing steady employment for dredge crews and contractors, and stimulating service industries such as blacksmiths (one foundry in Bright), carriers, saw mills

etc. The Shire's softwood industry has its origins in the large areas of shingle and gravel left behind by the early dredges. Charles Ruwolt established a foundry in Wangaratta in 1902, and later a branch office in Bright to service the dredging industry. Assisted by machinery import tariffs imposed in 1908, he went on to become Victoria's premier dredge manufacturer in the first dredging era, and his company later became the major engineering firm of Vickers-Ruwolt<sup>172</sup>. Pearson Tewksbury is recognised as the leading entrepreneur in early dredging, and his profits enabled him to expand his business empire, which included his development of the Yellow Cabs firm in Melbourne<sup>173</sup>.

The impact of dredging on the local economy can be seen in the snapshot of a year – 1908. Thirty-six bucket dredges were at work in the Upper

Ovens, one was idle, and three were under construction. The initial cost of the plants was £167,783. £98,909 was spent on fuel, wages & maintenance for year, plus about £20,000 to local saw mills. 480 men were directly employed, plus about 144 men cutting and carting firewood. A hundred draught horses were used in connection with operations, requiring 500 tons of chaff and 1400 bushels of feed annually. The dredges produced 46,000 ounces of gold for the year, valued at £184,000, and £53,874 was distributed in dividends, much of it to local investors. Between £15,000 and £16,000 had been spent on new buildings in Bright 'in the last few years'. Value of local farms up was said to be up by 100%, driven by increased demand for local produce<sup>174</sup>.



Gold dredge on Barwidgee Creek, Myrtleford, 1917  
(photo courtesy John Taylor, Myrtleford & District  
Historical Society)

### 3.3.7 UTILISING NATURAL RESOURCES: MAKING FORESTS INTO SALEABLE RESOURCES

The timber industry, along with agriculture and tourism, are the principal economic drivers in the Alpine Shire today. In 2001, Alpine's indicative value of timber goods produced was \$62million, the highest of the 12 North-East municipalities, and the industry accounted for 12.3% of total employment within the Shire, also the highest in the North-East<sup>175</sup>. The timber industry grew slowly within the Shire. Despite abundant resources in the mountains that dominate the Shire's geography, the area's relative remoteness from large markets, its small population base, and the difficulty of transporting products in the 1800s, meant that the early forest industries that did develop were essentially servicing a low-level local demand.

The advent of bucket dredging for gold in the Ovens valley in the early 1900s transformed the nature and scale of the industry within the Shire. This expanded the hardwood logging and milling industry in the Shire to satisfy the voracious appetite of the dredging industry for timber for both construction and fuel, and catered for expansion of the upper Ovens townships. The high demand lasted less than two decades, but it placed within the Shire considerable experience in timber-getting and milling. It also placed an awareness of the value of the resources within the Shire as the forest industry moved into a period of the twentieth century with improved logging, milling and transport technologies.

The pine plantings that began with a subsidised, experimental planting on dredged land at Bright in 1916 rapidly expanded, as over the next decade this became the standard rehabilitation method applied. These plantings moved seamlessly into the era of State policy-driven softwood plantings on the hillsides of the Ovens valley, and paved the way for the softwood milling and pulp production that dominates the Alpine Shire's forest industry today.

The Kiewa Hydro Electric Scheme's need for large quantities of lumber was the principal driver in the post-World War 2 resurgence of hardwood logging and milling in the Kiewa valley, and the Ovens valley followed suit with modern mills established at Porepunkah and Ovens.

#### **Native Hardwood Timber: Early Years**

The first timber cutting in the Shire was undertaken to build slab huts and stockyards on the early squatting runs. A few descriptions of constructions & timber use survive, such as the new hut on the Buckland river run in 1845<sup>176</sup>.

The first commercial saw mill in the region appears to have been erected at Beechworth by a Canadian in 1854<sup>177</sup>. In consequence, lumber prices dropped to half that of product formerly brought in. All constructions at

Beechworth at this time were said to be built of timber. Lumber for early Alpine Shire townships of the 1850s was imported from other areas, sawn by hand in pits, or slabbed. Slab and log huts and buildings were common in the early years<sup>178</sup>.

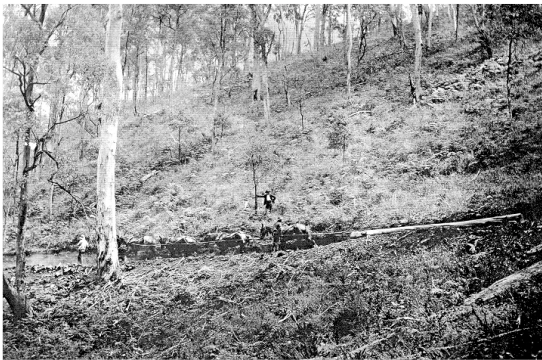
The first saw mill in the Shire was built in 1860 by Isaac Sloan of Freeburgh<sup>179</sup>. Logging increased as demand for mine timber and fuel for steam engines increased after reef mining got into full swing, and more saw mills were erected to cater for increased demand for construction



materials. Johnson Stephens started such an operation at Wandiligong in 1863<sup>180</sup>. The saw mills were small-scale and often combined with crushing mills and/or flour mills to maintain commercial viability. Examples within the Shire included Hendersons Mill at Porepunkah in the 1880s, Haig's Mill at Glen Creek in 1888, and Paul's Mill at Buffalo Creek<sup>181</sup>.

Some larger mines with high timber usage incorporated their own saw mills. The Rose, Thistle & Shamrock Mine, Harrierville, was the largest example. This mine built a saw mill, and constructed timber tramways over long distances, including incline tramways and lowering gear<sup>182</sup>.

Some mills were established in the mountains, at the source of the timber. These were 'portable' and could be moved as areas were used up. Examples include Mr Sinclair's saw mills in Big Ben north of Dederang, 1880s, Pini & Co at Basin Ck near Myrtleford in 1880, W Ellis at Waterloo near Myrtleford 1900<sup>183</sup>, and also later dredging-era mills such as Sloan Bros of Freeburgh.



Hauling logs with horses, Ovens valley, c1900 (photo R Kaufman collection)

The early gold dredging era, 1900-1920, gave impetus to hardwood logging and milling. In 1908 for instance, 144 timber cutters were employed, and £20,000 was paid to local saw mills<sup>184</sup>. Many new saw mills

were set up, including Grossman & Fitzgerald's 'Wandiligong Saw Mills' at Wandiligong in 1903, who advertised bluegum timber for sale and advised 'Dredges specially catered for'. Other early 1900s dredging-era mills included Sloan Bros 'Freeburgh Saw Mills' in 1902, Sinclair Bros 'Ovens Vale Sawmills' at Ovens Vale in 1904, (later moved to Stanley), 'Premier Saw Mills' at Brookside in 1904, and 'Bright District & Tawanga Steam Saw Mills' at German Creek in 1904 (moved to Snowy Creek 1907)<sup>185</sup>. As dredging declined, so too did saw milling. By 1920 most of the new mills had closed, and sawmilling went into the doldrums.

### Large-Scale Commercial Hardwood Forestry

Large-scale commercial hardwood logging and milling was a product of mid-twentieth-century transport improvements, and improved logging and milling techniques. Logging in the upper Kiewa valley led the revival in the Shire, driven by the Kiewa Hydro Electric Scheme's high timber demand.

The first mill built by the State Electricity Commission of Victoria was a small one at Bogong Creek in 1939, to provide timber for the construction of the camp. This operated until 1945. A second sawmill was established at Howmans Gap in 1942. Because of its elevation, operation was seasonal. Workers' accommodation was added in 1947, and the mill operated until 1951<sup>186</sup>.

In 1945, Mate's of Albury built a large sawmill at Tawonga, replacing the smaller Johnson's and Sealey's mills which had operated in the 1940s<sup>187</sup>. Mate's sawmill was purchased in 1949 by the SEC, who set up a logging camp in Mountain Creek as an adjunct to the operation. They operated the Tawonga Mill until 1956, and leased to private operators in the following year. Addinsall & Sons had been operating a

sawmill at Glen Creek, and in 1960, formed a new company, Mount Beauty Timbers P/L, which purchased the Tawonga Mill. This company set up a new mill at Mount Beauty, and used the Tawonga premises as an adjunct to their operations until 1980. Mount Beauty Timbers undertook the first logging in the West Kiewa valley<sup>188</sup>.

In the Ovens valley, the Valley Sawmill at Ovens began operation in 1945 immediately after World War II. The operating company, Valley Timbers, sold out to Matthews Timbers of Melbourne in 1963<sup>189</sup>. Higher up the valley, Selwyn Timbers P/L set up a hardwood mill at Porepunkah in the 1960s.

Hardwood logging and milling was drastically cut in the Shire in modern times, with reductions in licence areas. The Porepunkah mill closed in the 1980s and the Mount Beauty Timbers mill, the last hardwood mill in Shire, went on care-&-maintenance in 2002. Some small private spot-mills remain within the Shire, catering to niche demand. However, trial hardwood plantations were initiated Myrtleford in the 1980s, and the hardwood industry may yet have new impacts on the economy of the Shire.

### **Softwood Industry: Pine Plantations**

Radiata pine seeds were brought into Australia from North America in 1857, and Baron von Mueller, Director of the Melbourne Botanic Gardens, had suggested plantation planting of the species as early as 1866. South Australia planted the first Australian plantation of Radiata pine for timber production in 1876, but it was not until 1880 that the first of the Victorian plantations was grown, at Macedon. Plantations at Creswick and the You Yangs near Geelong followed. In 1910, the first of a series of coastal plantings took place, but these ultimately failed<sup>190</sup>.

In the early 1900s in the upper reaches of the Ovens valley, various ways of rehabilitating large areas of dredged land were looked at, and experimental plantings of various tree species were tried, including black wattle (for tannin), and fruit and nut trees<sup>191</sup>. The Chief Superintendent of Nurseries and Plantations, A G Johnstone, visited the valley in 1914 and reported on the favourability of dredge tailings for pine plantations. He saw the introduction of a softwood industry as a way of compensating for the depredation of dredging on the local native forest, and commented that "if something is not done to replenish these forests, Bright must die with her mountain streams and what remains of her ancient forests"<sup>192</sup>.

By 1916, four locations had been nominated, two at Bright, one at Porepunkah and one at Eurobin. The first pine plantation in the Shire was planted on dredge tailings near the former racecourse at Bright in 1916, on 13 acres of leased land surrendered to the Crown by the Racecourse Dredging Company. The Racecourse Plantation was subsequently expanded to 62 acres<sup>193</sup>. A plantation at Wandiligong followed in 1917, on 20 acres of dredge tailings south of Dougherty's Bridge<sup>194</sup>. The Freeburgh, Porepunkah, Junction and Braithwaite Plantations were planted over the next six years. The Hill Plantation at Bright was the only one of this era not planted on tailings. The land there was infested with St John's Wort, and planted with pines in an experimental attempt to smother the weed<sup>195</sup>. Harrierville began in 1921 on the Bright Star Dredge tailings, and plantings of radiata pine, with small areas of other conifers, became standard rehabilitation practice.

From 1927, the rate of new Victorian pine plantings increased to 1000Ha per year (11,000Ha by 1938), driven

by government policy to reduce dependence on softwood imports. Because of the failure of the coastal plantings, the government looked next to poorer foothill country at Scarsdale and Myrtleford. A 300 acre block was planted behind the Ovens Railway Station near Myrtleford in 1927, and other plantings followed in the vicinity of the township<sup>196</sup>.

With the provision of the Unemployed Relief Funds during the Great Depression of the 1930s, sustenance work began on native forest clearance and pine planting in several places in Victoria. Large 'Susso Camps' were formed in many parts of the Shire. During the 1920s and 30s, the Forests Commission supervised pine plantings by sustenance workers, at Morses Creek, Buckland River and Myrtleford. Nurseries were established at Bright and Ovens<sup>197</sup>.



Long line of 'Susso' workers moving across burnt hillside, Wandiligong, 1935 (photo A Kennedy collection, per R Kaufman)

The Forests Commission of Victoria built a softwood mill at Bright in 1932, situated near original Racecourse plantings. After milling the first harvest, it was closed down in 1934. A privately-owned pine mill was built at Bright in 1937 by Bright Pine Mills Pty Ltd, and was known locally as 'Swallow's Mill'. A second privately-owned pine mill was built at Porepunkah by Porepunkah Pine Mills Pty Ltd<sup>198</sup>.

The Shire's plantations received a setback when two thirds of Bright's pines were destroyed in the 1939

bushfires<sup>199</sup>. However, the acreage was steadily increased. Some other softwood species, principally Douglas fir (oregon) were also planted. In 1944, the Forests Commission involved itself in a scheme which saw high school boys spend summer holidays employed in plantation work, wood chopping and nursery work. The Boys Camp at Bright was one of four camps built in Victoria. Near the end of World War 2, internee labour from the Whorouly East Internment Camp was employed on plantation work in the Alpine Shire. Prisoners-of-war were lodged at the Boy's Camp in Bright, and at the forestry camp at Ovens. In 1949, the Bright camp was upgraded for use as a camp for migrant workers engaged in plantation work. Migrant workers were also briefly housed at the Ovens camp, before a new camp was built at Slaughteryard Creek on the Buffalo River, in association with the establishment of the Merriang plantation<sup>200</sup>.



Planting pines in the Ovens valley, 1930s (photo A Kennedy collection, per R Kaufman)

The need for a mill at Myrtleford had become obvious by the middle of the 1900s, and Local Timbers Ltd built a pine mill which commenced operation at Myrtleford in 1951. Plantation growth was slow at this time because of loan fund cutbacks, but increased after the pine plantation expansion (PX) program commenced in 1961. This first Commonwealth-States Softwood Forestry Agreement was ratified five years later in 1966, and

replaced in 1976 by a second Agreement<sup>201</sup>.

Bowater-Scott Australia P/L took over the Bright, Porepunkah and Myrtleford pine mills in 1970, and operations were consolidated to Myrtleford in the early 1970s. A new large-scale pulpmill and saw mill was opened in 1972, and a plymill, the largest in Australia, was commissioned in 1981<sup>202</sup>. Today the Myrtleford plant is the largest forest industry employer in the Alpine Shire.

### **Other Plantations**

As early as 1917, a scheme for planting spruce trees on the Dargo High Plains, for paper manufacture, received considerable support but was eventually abandoned. Nothing eventuated from a similar proposal for the Bogong High Plains in 1920<sup>203</sup>.

In the 1960s and 70s, plantations of poplars were begun in many areas of Eastern Australia, spurred on by projected demand from safety match manufacturers. In the Alpine Shire, a number of small trial plantations of poplars were grown. Examples include the SEC trial at Mount Beauty, portion of the School Plantation at Bright (1969), and Forests Commission plantings at places such as Mill Bend, Porepunkah, and Bakers Gully, Bright<sup>204</sup>. The match market

subsequently collapsed, and Australian manufacturing plants closed<sup>205</sup>.

### **Other Forest Industries**

Other forest industries such as charcoal burning and eucalyptus distilling are known to have been practised within the Shire, but have left few imprints in the historical record. Charcoal burning was widespread in association with blacksmithing, and is assumed to have reached its greatest expression within the local quartz mining industry. Charcoal pits exist at Howman's Gap in the headwaters of the Kiewa Valley, in association with the Kiewa Hydro Scheme operations during World War II<sup>206</sup>.

Eucalyptus distilling does not appear to have been widely undertaken in the Shire. In 1892, a 'eucalyptus factory' appears to have been operating in the Buffalo River area<sup>207</sup>.

Apiculture, or bee-keeping for honey production, based on native tree and shrub species has long been carried out in all parts of the Shire. Seasonal transfer of colonies between the High Country and the lower valleys has been a feature<sup>208</sup>. Apiculture has essentially been a cottage industry, and again has left few imprints in the historical record.

### 3.3.8 UTILISING NATURAL RESOURCES: TAPPING NATURAL ENERGY SOURCES

Water power, a natural energy source, has had major impacts on the development of the Alpine Shire. This reached its zenith with the construction of the Kiewa Hydro-Electric Scheme in the headwaters of the Kiewa Valley. The Scheme saw thousands of construction workers, many of them migrants, come to the area, the townships of Mount Beauty and Bogong constructed, extensive scientific research undertaken in the Alps, the beginnings of Falls Creek as a major ski resort, and upgraded road connections out of the upper Kiewa Valley.

However, there was earlier widespread use of water as a motive power for industry, taking advantage of the high rainfall, run-off and hydraulic gradients offered by the mountain country that dominates the geography of the Shire. Historically, wind power in the form of windmills has found little use in raising water for agricultural purposes in the Shire, because of the sheltered, relatively-narrow valleys and the availability of flowing water close at hand.

#### Water Power in Industry

The use of water for powering stamp mills at quartz mines in the district was common from the very beginnings of quartz mining in the Shire, in the 1850s. The reefing fields of the Shire characteristically contained abundant relatively-small, widely-distributed lodes, resulting in the erection of many stamp mills, numbering in the vicinity of three hundred. Roughly two-thirds of these were water-powered, demonstrating the reliance of the pre-eminent local industry of the mid-late 1800s on the efficiencies of natural energy sources<sup>209</sup>. Overshot waterwheels were used in the early years of mining, and many such wheels operated at places including Wandiligong, Harrietville, Myrtleford, Buckland River, Buffalo Creek,

Havilah, Bright, Freeburgh, Upper Dargo and Porepunkah. One of the largest of these in the Shire was at the Big Mill, Harrietville. This overshot wheel was 40-feet in diameter, 5-feet wide, and incorporated 84 buckets<sup>210</sup>.

Water wheels were also used to power beam pumps, and a number of examples are known in the Shire<sup>211</sup>. Late in the 1800s, many hydraulic sluicing operations used high-pressure water in 'elevators', which incorporated venturis (high-pressure 'suction' lifters) to raise the broken-down, gold-bearing gravels up into sluice boxes mounted on trestles<sup>212</sup>.

As timber milling began in response to increased local demand for construction and mining, water power was again commonly harnessed, using the same overshot wheels (eg Proctor's sawmill, Harrietville). Sometimes, sawmilling and quartz crushing were carried out on the same premises, such as at Paul's Mill, Buffalo Creek, from 1882. Waterwheels also gained limited use in agriculture, powering small machinery such as chaff-cutters. One such unit was built by Tavare, at Harrietville<sup>213</sup>. Flour mills were also powered by



Derelict Big Mill waterwheel at Harrietville in 1936 (photo: A Kennedy collection,

water. Henderson's Mill began as a water-wheel powered flour mill 1873, and added a saw mill and stamp battery in the 1870s, expanding operations to both sides of the Ovens River, just upstream of Porepunkah<sup>214</sup>.

New water-power technology in the form of Pelton wheels (high-pressure impulse turbines) was introduced in the late 1800s, and these wheels were widely used in mountainous areas in the southern portion of the Shire. The majority of State's extant relics of this technology exist in Alpine Shire, at places such as the Guns, Centenary, Star Extended and Razorback mines in the East and West branches of the Ovens River near Harrierville. Between 1888 and 1896, Haig & Sons of Glen Creek operated a flour mill and saw mill powered by a 31hp 25cm turbine wheel at 90 ft pressure of water<sup>215</sup>.

Other forms of water power were experimented with in the Shire. A barrel-type, low-pressure turbine, a 'Roundy wheel' of American origin, was installed at the stamp mill of a mine in the West Kiewa River valley in about 1890<sup>216</sup>. This is the only known use of this technology in the State.

As electric power was being introduced into industry world-wide, so a limited number of local mines adapted to this new age of industrial power, using small hydro-electric plants. Local leader was the Pioneer Mine at Bright, which electrified its operations in 1905, using a "New American" vertical turbine operating at 28psi pressure to drive a 25Kw generator. The turbine direct-drove the crushing plant, and DC electric power was supplied to surface and underground lighting, pumps and the large winder or winch, which hauled ore up the internal main shaft<sup>217</sup>. In the 1890s, the Crescent & Victory Mine at Harrierville generated electric power for surface lighting with

dynamos attached to small Pelton wheels<sup>218</sup>. Jennings No 1 Pump Co in the Buckland installed a Pelton wheel driving an electric lighting plant in 1899<sup>219</sup>. In 1921, the Rose, Thistle & Shamrock Mine at Harrierville installed a Pelton wheel-driven generator to provide electric lighting in their bottom adit<sup>220</sup>.

### **Kiewa Hydro-Electric Scheme**

*Text for this sub-section provided by Dr Ruth Lawrence<sup>221</sup>*

The Kiewa Hydro-Electric Scheme was first proposed in 1911, although construction did not commence until 1938 following the establishment of the Victorian State Electricity Commission (SEC). Prior to their entry to the region, the upper Kiewa valley was a relatively remote place, with a small farming population. Two very small towns, Tawonga and Dederang, served the local farming communities, and several other small centres of community existed, such as Mongans Bridge, Coral Bank and Upper Gundowring. The SEC used Tawonga township as their operational headquarters, and installed office and residential accommodation. Later, in 1949, the SEC built a hospital at Tawonga.

Early progress saw the construction of a main access road, the township of Bogong, and the Clover Power Station. The Tawonga Gap Road was upgraded in 1939-40 to provide access to the Bright railhead for transport of machinery and equipment, and a small depot was constructed in Bright in 1939, as a store and to house SEC personnel. This road proved to be unsuitable for many of the loads, and a road connection to the Bandiana railhead was upgraded between 1948 and 1955, becoming the Kiewa Valley Highway. The SEC had a high demand for timber, and set up the first of a number of sawmills at Bogong

Creek in 1939. They subsequently undertook the first hardwood logging in the headwaters of the Kiewa River.

Field investigations made during the mid 1940s led to a new proposal for a Scheme that had more than double the capacity of the 1938 Scheme, and was approved by the Victorian Parliament in 1947. The number of personnel engaged in the construction of the Scheme then increased dramatically, and during the late 1940s, most activity centred around the construction of the West Kiewa Power Station, Rocky Valley Reservoir, McKay Creek Power Station, Bogong Creek Aqueduct, and the Big Hill Power Station (which was later deleted from the Scheme). In 1946, work was begun on the Mount Beauty township, a well-designed 'model-town' for the Hydro workers, with good amenities. Prefabricated buildings were imported from England, assembled in Melbourne, and brought to the site. Mount Beauty became the first large township in the history of the upper Kiewa valley.

Considerable interest in skiing in the Bogong High Plains area had developed over the years, and access had traditionally been from Mt Hotham. The new road connection from Mount Beauty inspired several ski clubs to apply for permissive occupancies at Falls Creek in the late 1940s. The Ski Club of Victoria erected the first hut in 1947, and in 1948 the Skyline Ski Club built the first lodge. These were the beginnings of the Falls Creek ski resort.

In March 1951 there were 3459 personnel, many of them post-World War II migrants, employed on the Kiewa Hydro-Electric Scheme. However, major complications developed in August 1951, when a severe shortage of loan monies occurred. Many developmental projects in south-eastern Australia

were affected, including work on the Kiewa Scheme. The recruitment of labour ceased, many workers left the



Junction Dam c1950 (photo © State Library of Victoria)

Scheme, and work was restricted to the Bogong Creek Aqueduct, the West Kiewa development, and tunnels feeding the McKay Creek Power Station. The West Kiewa Power Station was completed in 1956, and by June 1961 the Rocky Valley Reservoir, McKay Creek Power Station, Pretty Valley pondage, and 35 kilometres of unlined aqueducts feeding the two storages were completed. This brought construction work on the Kiewa Hydro-Electric Scheme to a conclusion, and no subsequent additions to the facility have been made, although several have been proposed.

In October 1957 the administration of Mount Beauty was passed from the SEC to the Bright Shire Council. The roads were formally gazetted, and land title conferred on Council.

The completed Kiewa Hydro-Electric Scheme comprises power stations at McKay Creek, Clover and West Kiewa, and utilises water from 310 square kilometres of the Kiewa and adjacent catchments. Rocky Valley Reservoir has a capacity of 28,000 million litres and, being at an altitude of 1599 metres on the Bogong High Plains, is the main reservoir for the Scheme. Water for the McKay Creek Power Station is conveyed from the Rocky Valley Reservoir and the

supplementary Pretty Valley pondage through 5.5 kilometres of sub-surface tunnels, a surface pipeline, and pressure tunnel, to the six 16-megawatt generators in the underground power station. The water discharged from the McKay Creek Power Station flows down the Pretty Valley branch of the East Kiewa River to meet the Rocky Valley branch at Bogong township. Lake Guy, located just below the junction of the two streams, forms the head storage for the Clover Power Station, and the water is conveyed through a tunnel and a pressure shaft to the two 13-megawatt generators in the second power station, after which it is discharged into the Clover pondage. A tunnel from the Clover pondage is then joined by a tunnel conveying water from the West Kiewa diversion, and the combined flow passes through a pressure tunnel to the four 15.4-

megawatt generators of the West Kiewa Power Station, which are located 140 metres underground. From this power station water is discharged through a rock tunnel and an open canal to a regulating pondage at Mount Beauty. The pondage serves to smooth out the fluctuations in the flow before the water is released back into the Kiewa River. The Scheme has an installed capacity of 184 megawatts and an average annual output of 300 million kilowatt-hours.

The Scheme continues to provide a major source of employment in the Shire, directly and indirectly. The Kiewa Hydro-Electric Scheme has also been a tourism contributor in its own right, as Victoria's showcase of hydro power, and tours to Mt McKay Power Station were conducted for several decades.



### 3.3.9 CATERING FOR TOURISTS: LODGING PEOPLE

Tourism has been a very important historical theme in the Alpine Shire since the late 1800s, and is today the major contributor to the economy of the Shire. The early growth of tourism was driven principally from Bright, in response to the imminent arrival of the railway, and deteriorating economic circumstances relating to the mining industry.

Skiing is an important sub-theme. The Alpine areas of the Shire were the earliest skied areas in the State, and Mt Buffalo led the development of organised ski tourism in Victoria. Significant eras are the 1880s to 90s, when local organisations (Bright Alpine Club & Bright Tourist Association) and commercial operators pioneered recreational skiing in the State, and the 1920s to 30s, when the industry was revived in the higher ranges of the main divide, with active promotion and successful lobbying from the Ski Club of Victoria, the Victorian Railways, local associations and individuals. Today the Shire contains the State's highest elevation ski fields (Mt Hotham, Falls Creek, and Dinner Plain), and its earliest major ski field (Mt Buffalo).

#### The Beginnings

The outstanding scenic attractions of the upper Ovens valley, including Mt Buffalo, had been recognised from the early years of settlement. The Russian-born artist, Nicholas Chevalier, was impressed with the spectacular scenery at Mt Buffalo, and sketched it from several places in the Ovens and Buffalo River valleys. A large painting titled 'The Buffalo Ranges' was purchased by the National Art Gallery in Melbourne in 1864, its first local acquisition<sup>222</sup>. Various anecdotal accounts of tourist parties being led to the summit of Mt Buffalo as early as the 1850s exist<sup>223</sup>. The first contemporary account comes from February 1872, when a party of four men with a Chinese guide ascended Mt Buffalo from Scott's Hit-or-Miss Hotel in the Buckland<sup>224</sup>. In the Easter holidays of 1874, a party of six men guided by Hugh Harkin ascended to the top of Mt Feathertop, going first to Mother Morrell's hospice, built in 1863. This party came by train to Wangaratta (connected 1873), and thence by coach to Harrietteville<sup>225</sup>. Mt Hotham and Mt Feathertop were visited by Governor Bowen in 1874,

and the 640-acre Diamantina Springs Public Reserve near Mt Hotham was declared<sup>226</sup>.

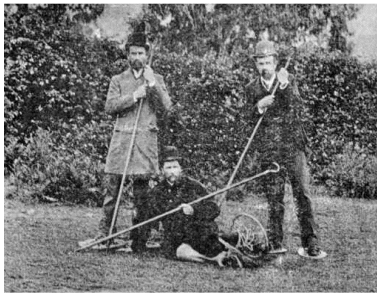
By the 1880s mining was in a recession, and with the coming of the railway, the community leaders of the main commercial centre, Bright, saw the potential of tourism as a means of broadening the economic base of the district. As early as 1883, it was reported that the district was fast becoming a popular holiday resort for people from the large towns and cities of the colony during summer. Interest in the 'beauty and grandeur of our mountain scenery' by some hardy souls in winter was also mentioned<sup>227</sup>.

The Alpine Club, with W Staker as President, was formed in the 1880s. A prime motive was to develop tourism on Mt Buffalo, and a first step was provision of easier access to the summit. A track was blazed by the Weston brothers, and cleared in 1887. This enabled the Manfield and Carlile families to pioneer organised tourism on the mountain. Hotels in the Bright district began advertising tourist accommodation, and Snell's

Temperance Hotel was possibly Bright's first tourist guest house<sup>228</sup>.

The connection of the railway to Myrtleford in 1883 assisted tourism in the area. By the late 1880s, large numbers of excursionists were passing through Myrtleford on their way to Bright and the mountains during holiday times. After a busy Easter in 1888, Myrtleford residents lamented the lack of 'pecuniary benefit' to their town from the rapidly transiting through<sup>229</sup>. Visitors began exploring the High Country, staying at Harrietville, St Bernards Hospice, or Mother Johnsons at Brandy Creek<sup>230</sup>.

In Bright, the first planned, roadside tree plantings were undertaken in the mid-late 1880s, and by 1889 neat rows of poplars and elms had reached above roof height. In 1889, a Tourist Club was formed, with Dr Wilkinson as Secretary. Telemachus of the *Argus* reported that "the Tourist Club made tracks to inaccessible peaks and helped visitors to pilot their way through 'The Alpine Regions'"<sup>231</sup>.



Committee of the Bright Alpine Club in January 1892 (photo © State Library of Victoria)

In January 1890, Bright scored a promotional coup by securing a well-publicised visit by the Australasian Association for the Advancement of Science, who undertook escorted journeys into the high country. Also in 1890, the railway was finally connected to Bright, providing a massive boost to tourism.

The 1890s were a busy time in the development of tourism. Existing accommodation houses were improved and extended, and new

facilities such as Rosedale Guest House and Manfield's Temperance Hotel were opened. The local paper regularly published visitor lists, and the Alpine Club consolidated its efforts to market Bright as an ideal tourist resort, and a health resort. A guide book, "Illustrated Guide to the Australian Alps", was published. Porepunkah formed its own Alpine Tourists Association and published its own "Tourist Guide Book", developing a rivalry with Bright. Crawford & Co ran coaches for tourists, charging £1 each way for their bi-weekly special runs from Bright to the St Bernard Hospice<sup>232</sup>. Mick Dougherty, who became something of a local legend for his yarns and eccentricities, was one of the drivers on the Mt Buffalo and Mt St Bernard runs.

### A New Century

Tourism promotion continued into the new century, and new infrastructure was developed. In 1908, the formed road to Mt Buffalo plateau was opened with great ceremony, and in 1910 the Mt Buffalo Chalet was completed. This was run by the Victorian Railways, who began a long and fruitful association with High Country tourism in the district.

Recreational fishing became a valuable component of tourism in the Ovens valley from the 1890s, and for a time in the first part of the 1900s was the mainstay of tourism in the Kiewa valley. Here, accommodation was available at the Bogong Hotel, a guest house and at Mr Ryder's Poplar farm<sup>233</sup>. Stocking of rivers with trout and other species began in the 1890s. The Buffalo River and Nog Nog Creeks were stocked in 1891<sup>234</sup>, and the Ovens River at Myrtleford and Bright in 1892<sup>235</sup>. The Bright District Anglers Club was formed in 1902, and a trout hatchery was built there in the early 1900s<sup>236</sup>. However, the early period of

dredging, and several large hydraulic sluicing operations being carried out concurrently, interrupted fishing in the Ovens, and may have contributed to the popularity of fishing in the Kiewa valley in this era<sup>237</sup>. In 1908, the Nug Nug, Sandy, and Happy Valley Creeks, and the Little River (Kiewa) had all been recently stocked with trout<sup>238</sup>. Fishing was revived in the upper Ovens River in the 1920s, and the Bright hatchery was later releasing 50,000 fry annually<sup>239</sup>.

Tourism declined during the years of the First World War, and in the 1920s Bright embarked on a program of visitor infrastructure construction. The Progress Association installed a pathway along the Ovens River, including the Canyon Walk, in 1923-24<sup>240</sup>. The first five swing-bridges over the Ovens were constructed, and stone shelters were built at key locations at what is now Centenary Park, the Municipal Caravan Park, and Pioneer Park. Further tree plantings were undertaken. Edward Delany was a key figure in tourism development, as Bright Shire Secretary for 34 years and a leading light in the Bright Progress Association<sup>241</sup>.

In the 1920s, re-invigoration of the high-altitude ski fields began, at Mt Hotham and the St Bernard Hospice. The Alpine Road to Omeo was repaired after years of neglect declared a Tourist Road in 1936. In the 1920s and 1930s, there was intensive coverage of local ski fields in Melbourne newspapers and magazines. William Spargo, operator of the Hotham Heights Chalet and member of the Ski Club of Victoria, was the key instigator in this publicity<sup>242</sup>.

In the 1950s, Bright township appeared 'run-down', and community-led renewal and beautification programs were entered into. On the

ski-fields, larger-scale developments began at Mt Hotham and at Falls Creek in the late 1950s. The latter marked the beginning of large-scale tourism in the Kiewa valley, and the attractions of the upper Kiewa became more widely known. Camping, fishing, bushwalking and snow sports were available, and much accommodation and service development has occurred in modern times, particularly at Tawonga South. The Kiewa Scheme itself provided interest for visitors, and tours of Mt McKay were conducted for decades. In 1965, the Lake Buffalo water storage on the Buffalo River was completed, and gave a boost to Myrtleford tourism by providing opportunities for power-boating, water-skiing, lake fishing, swimming etc.

Modern tourism in the Shire is much more broadly based geographically than in the early years. Key recent changes have included large accommodation development on-mountain at the ski resorts, construction of the Rail Trail along the route of the old railway line in the Ovens Valley, introduction of adventure activities such as hang-gliding and para-gliding, and the construction of the Dinner Plain ski resort. Lifestyle product is also increasing.

### **Skiing**

Organised skiing in Australia began on the Kiandra gold diggings in NSW in 1860-61, and a ski club, arguably the oldest in the world, began at about this time. Until the 1920s, skiing as a sport did not enjoy the same popularity in Victoria as it did in NSW, but was enjoyed recreationally from the 1880s<sup>243</sup>.

The use of skis within the Alpine Shire goes back as far as the early 1860s, when they were used by miners crossing the high country. In 1863, Louis Hanckar was said to have had a

pair of skis planted at high altitude on the road to Harrietville, above his hotel at Louisville in the Upper Dargo. He would use these skis to cross the divide to the Ovens valley in winter<sup>244</sup>. Mailmen crossing to and from the Dargo were also said to have used skis sometimes.

Recreational skiing in the Shire probably began in the late 1880s at Mt Buffalo and in the main divide, at Mt Feathertop and around the hospice at Mt St Bernard. Elsewhere in the State, the potential of Mt Buller was proposed as early as 1913, but skiing did not occur until the mid-1920s and development as a resort did not begin until 1946. Mt Donna Buang was not skied on until 1925<sup>245</sup>.

Mt Buffalo, with its various privately-run lodges from the 1890s onwards, is considered to be the nursery of recreational and sporting skiing in Victoria<sup>246</sup>. It was declared a National Park in 1898. The formed-road access was completed in 1908 and Mt Buffalo Chalet's completion in 1910 cemented the mountain's leading role in ski tourism in the State. The importation of Norwegian skis to Mt Buffalo in 1919 by Hilda Samsing is considered to have given the initial impetus to sporting skiing in Victoria<sup>247</sup>. Victorian Railways operated the Chalet, and for a time Feathertop Bungalow (1928-39) and Hotham Heights Chalet (1933-52). Their promotion of the high country was a crucial contribution to the success of the local snowfields. Australia's first motorised ski tow was built at Cresta on Mt Buffalo in 1936-37, and first used August 1937, attracting record crowds<sup>248</sup>.

The St Bernard Hospice catered for the few winter skiers and tobogganers venturing to the higher altitudes as well as the summer crowds from the 1880s to the First World War years, after which business slackened

considerably. A summer coach service operated from the 1890s, and a motor car service began in 1920. The hospice then closed for a few years and was re-started in 1924 by Barney Rush<sup>249</sup>.

In the vicinity of Mt Hotham, the only accommodation available for the few hardy skiers in the 1890s was Lawlers Hut at Diamantina Creek, just below the Omeo Road. The cattlemen, who had built the hut in the early 1890s, resented its use by walkers and skiers, and moved it to Mt Higginbotham in the early 1900s. Between 1910 and the mid-1920s this hut was the only accommodation for visitors on the mountain<sup>250</sup>. The Bungalow Spur Track up Mt Feathertop was cut in 1906, to assist walkers and skiers, and six years later the Feathertop Hut was built by the Harrietville Progress Association<sup>251</sup>.

The Hotham Heights Chalet was built by the Country Roads Board (CRB) in 1924. The building was part of its network of facilities built along the Alpine road, which had been neglected for many years prior to 1920. William Spargo, a roadman for the CRB and later the discoverer of the Red Robin Reef, leased it for tourism purposes in 1927. This Chalet provided 20-bed accommodation. Shorter access was provided via the old Bon Accord mining track, improved in 1933. By 1950, about 90 beds were available on Hotham, by 1984 about 2500, and by 2002, 4300<sup>252</sup>.



Hotham Heights Chalet, 1920s (photo © State Library of Victoria)

A key influence in the development and promotion of the Shire's ski fields was the formation of the Ski Club of Victoria (SCV) in 1924. This was the first club in Victoria and the fourth in Australia. The Progress Association of Bright, along with those of Mansfield and Warburton, helped draft the constitution for the club. The SCV realised that sporting skiing in Victoria needed high altitude ski-fields to flourish, and put their energies into developing Mt Hotham and Mt Buller<sup>253</sup>. In 1932 at Mt Hotham, they staged the first Australian National Ski titles<sup>254</sup>.

Bogong High Plains was skied from Mt Hotham in the 1920s, and the old mining track snow pole lines from the 1890s were renewed in 1925<sup>255</sup>. The first winter skiing ascent of Mt Bogong was carried out in 1928, with access from Mountain Creek. Cleve Cole, a member of the SCV, was instrumental in early promotion of Bogong, as access was improved. Cleve Cole died in shocking weather conditions on Mt Bogong in 1936, and the Cleve Cole Memorial Hut was dedicated in his honour in 1938<sup>256</sup>.

As skiers penetrated further into the Alps, use was made of various existing cattlemen's huts, and new huts were built. These included the Feathertop Bungalow, opened by a consortium in 1925, and later run by the Victorian Railways. It was burnt down in the 1939 bushfires and not replaced. Another was Cope Hut, funded by the State Tourist Committee in 1929. Many others followed<sup>257</sup>.

Falls Creek's development as a ski resort began with permissive occupancies granted by the SECV in the late 1940s, and the first lodge was built in 1946. As with Mt Hotham, major development did not begin until the late 1950s. The first ski tows at Mt Hotham and Falls Creek were built in 1951. These two resorts have undergone enormous growth in the modern era, and are now administered by the Alpine Resorts Commission. Dinner Plain, a new ski village east of Mt Hotham, was opened in 1986, and Mt Hotham Airport was constructed further to the east again in the 1990s.

### 3.3.10 ALTERING THE ENVIRONMENT: REGULATING WATERWAYS (ESTABLISHING WATER SUPPLIES)

Regulating waterways is an important historical theme in the Shire, not least for the water regulation works associated with the Kiewa Hydro Electric Scheme, which are detailed elsewhere. Another significant venture was the construction of Lake Buffalo on the Buffalo River in 1964-65, which regulates water flows for local irrigation, and town water supplies for downstream areas (Wangaratta). An earlier layer of water regulation exists throughout the Shire, in the river and creek diversions and complex network of water races installed principally during the gold mining era in the mid to late 1800s.

#### Gold Era

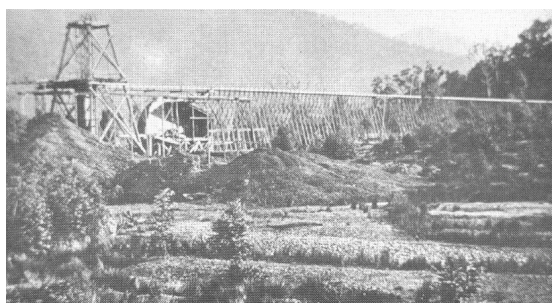
Extensive and complex water reticulation and supply networks are characteristic of the mountain goldfields of eastern Victoria, diverting river and creek flows to assist in ground sluicing and later hydraulic sluicing, and to supply water to battery sites (and saw mills, flour mills etc). These networks are particularly well developed in the Alpine Shire, at all places where gold has been mined, and especially such places as the Buckland River valley and Harrietville.

By 1857, 100 miles of water races had been constructed in the Buckland valley, at a cost of about £300 per mile, and a number of wooden flumes (aqueducts) had been constructed across creeks and gullies<sup>258</sup>. In 1868, the Beechworth Mining District had about 2½ times more length of water races than the nearest other Mining District in the State (Maryborough). In that year, the Buckland Subdivision of the Beechworth Mining District had 165 miles 60 chains of licensed races, built at an approximate cost of £11,824 (does not include abandoned races)<sup>259</sup>.

Early alluvial mining in the region was heavily influenced by Californian miners, who introduced the sluicing methods to the fields<sup>260</sup>. In the early years of the Upper Ovens diggings, races were cut to claims under a permit system, and there was much

duplication of effort, and many disputes over ownership of water. A license system for diversion was introduced by an Act of the Victorian Government in 1862, setting fees, conditions and privileges<sup>261</sup>.

Race-holders could sell water to claim holders, and many races were operated as commercial enterprises. In the 1860s, Buckland miners who were engaged in ground or hydraulic sluicing could rent what were called 'ground sluice-heads' from race owners for a fee of £2 to £3 per week, with water gauged according to the Beechworth Bye-laws. By the end of the 1860s, letting water was being dropped in favour of a share arrangement, where the race holder became a partner in the claim, commonly getting a quarter of the gold after working expenses<sup>262</sup>.



Long elevated flume (water channel on wooden trestle) leading from water race on hillside to waterwheel at Wallace's Deep Lead Mine, Bright, 1880s (photo Railway Museum, Bright)

A feature of the late 1800s was the construction of long, high-level water

reservoirs to supply water at high pressure to the larger-scale hydraulic sluicing operations. Construction of holding reservoirs was rare due to the steep terrain and general unreliability of the river flows, but one such stone-walled reservoir was constructed in 1898 on the Mt Buffalo plateau for the Buffalo Hydraulic Sluicing Co, at a cost of £450. The dam wall collapsed a year later<sup>263</sup>. Another on the plateau was built by the Jennings No 1 Pump Co at the same period.

### Lake Buffalo

The post-war boom in tobacco growing in the Myrtleford district and the consequent increase in water supply demand, combined with the need for a better water supply to service the expanding city of Wangaratta, led to a search for a suitable site for a large reservoir. Various sites in the Ovens valley and its tributary streams were examined, and the site at Yarrabulla Creek on the Buffalo River was selected as the best available<sup>264</sup>.



Building the dam wall for Lake Buffalo, 1965 (photo © State Library of Victoria).

Some 860 acres of private land owned by eight families was acquired in 1963, and work on the dam began in May 1864. Works were completed a year later, at a total cost (including land resumption) of £1,650,000<sup>265</sup>. A second stage of works designed to increase capacity to 1 million megalitres, planned for 1970, was shelved. With an area of 340Ha and a full service volume of 24,000 megalitres, it is one of the smaller reservoirs now managed by Goulburn Murray Water<sup>266</sup>.

The regulation of water flows provided reliable water supplies to urban Wangaratta and downstream irrigators, although in 1968 it was realised that regulated dry-period flow was fully committed to irrigation<sup>267</sup>. In 2003, pumps were installed at the reservoir to gain access to waters below the lake's normal operating levels, and ease a severe downstream water shortage at Wangaratta<sup>268</sup>.

Lake Buffalo provided an added advantage to the Myrtleford district, in the recreational and tourism opportunities it opened up. Lake Buffalo has cemented an important role in local tourism and recreation, and become a popular place for picnicking and a wide variety of water sports including power-boating, yachting, water-skiing, swimming and fishing.

## 3.4 BUILDING SETTLEMENTS, TOWNS & CITIES

### 3.4.1 MAKING SETTLEMENTS TO SERVE RURAL AUSTRALIA

The Alpine Shire townships show great diversity in their eras and character, reflecting the diversity of their origins and later influences. They include 'gold rush' townships thrown up beside the diggings in the 1850s, small rural settlements developed after government Acts made land selection and closer settlement accessible, purpose-built twentieth century 'company towns' left over from the Kiewa Hydro Electric Scheme, and high-elevation ski villages, whose individual origins are also diverse.

Then there are the failed townships – the many mining camps and settlements that failed when the alluvial gold petered out, or the quartz reefs failed to deliver on their early promise. And the small rural centres, whose reason for being was overtaken with rapid advancements in transport and communications in the twentieth century, and now exist in name only for all practical purposes, along the highways and roads of the Shire.

The Alpine Shire townships can be considered in four geographical sections:

**The Ovens valley:** Earliest townships, dominated by gold origins – later variously influenced by intensive agriculture, forestry and tourism.

**Lower Kiewa valley:** Small agricultural townships or community centres from the 1870's, developed after land selection enabled closer settlement. These small centres represented the base-line for agricultural township development in narrow river valleys, and the probable upper limit for Ovens valley township development without the impact of gold, and subsequent diversification of economic base.

**Upper Kiewa valley:** Hydro towns, from the mid-twentieth century.

**Gippsland fall:** Early gold towns which, because of lack of alternative resources (such as available agricultural land), did not survive depletion of their gold resources. Twentieth century ski villages.

#### **Goldfield Towns**

*Bright (Morses Creek) 1854 – surveyed 1861*

*Myrtleford 1854 – surveyed 1859*

*Porepunkah (Ovens Crossing) 1853 – surveyed 1859*

*Freeburgh (Woolshed) 1854*

*Smoko 1860s*

*Harrierville 1854*

*Wandiligong (Growlers Creek) 1854*

*Gapsted (Quartz Reef, Palmerston) 1854*

*Rosewhite (Happy Valley) 1856*

'Failed' gold towns/settlements:

*Mayford 1860s*

*Louisville 1863*



*Brocket 1860s*  
*Cobungra (Brandy Creek) 1880s*  
*Running Creek (Havilah) 1861*  
*Upper Buckland 1853*  
*Lower Buckland 1853*  
*12-Mile (The Camp) 1853*  
*Miners Right 1870s*  
*Germantown 1850s*  
*Verdon 1867*  
*Evening Star 1860s*  
*Woolshed (Woolshed Flat) 1860*  
*Johnson's 1860s*  
*Havilah (= Running Creek)*  
*Little Woman's (Frasers) 1865*

The first townships in the Shire no longer exist. These were the early townships on the Buckland River diggings, thrown up at the end of 1853 at the height of the Buckland River gold rush ('Smithfield' and 'St Giles', at the Camp, or 12-mile)<sup>269</sup>. A camp also grew up at the Ovens Crossing, later known as Porepunkah). Latecomers to the rush, which attracted 6000-8000 diggers, spilled out into the Ovens River valley, clustering at the junction of Morses Creek and the Ovens River, later Bright. Miners rapidly moved up the main valley, forming successive camps at Freeburgh, Harrierville etc. It is probable that hastily-erected shanties on the new and busy Buckland road from Beechworth formed the foundation of the small local centres of community that developed at Ovens Vale, changed to Ovens in 1928, and Black Springs, changed to Eurobin in 1870. In the late 1850's, Hughes Restaurant at Black Springs and Trapp's 'hospitable mansion' between Black Springs and Myrtleford probably represent the beginnings of these places<sup>270</sup>. At Myrtleford, shanties appeared beside diggings along the Happy Valley

Creek, and a butcher's tent was put up near the Barwidgee Creek crossing. On a large spur jutting out into Ovens valley just upstream of the Barwidgee Creek crossing, a rich quartz reef, the Reform, was found in 1854, and workings here beside the Buckland road became the nucleus for growth of the township of Myrtleford<sup>271</sup>.

The earliest contemporary account of diggers at Wandiligong (Growlers Creek) is from March 1854, shortly after Bright in January 1854<sup>272</sup>. As populations became established, prospectors moved out to make further discoveries. Happy Valley Creek was rushed in 1856, and a settlement formed. A rush to the Running Creek reefs in 1860-61 saw a township develop, initially with an estimated population of 1000 people<sup>273</sup>.

The Upper Dargo was rushed in 1863, and the small settlements of Louisville, Brocket, Mayford were formed along the river. The Cobungra River was opened from the Omeo side in the late 1850s, and the discovery of Brandy Creek in the early 1860s led to a small township with hotels and stores being formed<sup>274</sup>.

### **Agricultural Towns**

*Dederang 1870s*  
*Mudgegonga 1880s – surveyed 1883*  
*Tawonga c1880*  
*Tawonga South (Upper Tawonga)*  
*Upper Gundowring*  
 Former 'agricultural' towns or centres of community:  
*Eurobin (Black Springs)*  
*Coral Bank (Mullindolingong)*  
*Glen Creek, Mongan's Bridge*  
*Gundowring, Buffalo River*

The Kiewa was a dead-end valley, and had no through roads until relatively late in the 1800s. The trigger for the

seeding of the Kiewa valley towns or their dates of origin are not precisely known, but they are generally acknowledged to have formed as a logical consequence of closer settlement and expansion of population within the valley after selection. Installation of small schools to service the farming communities after compulsory education was introduced in Victoria in 1872 may have been another trigger.

Small agricultural towns in other parts of the Shire, such as Buffalo River and Mudgegonga, have similar origins.

### **Ski field Towns**

*Mt Hotham 1920s*

*Falls Creek 1940s*

*Dinner Plain 1986*

Mt Hotham gradually grew from the 1920s on the old mining track crossing

the high country, after the Country Roads Board upgraded the road and leased out the 'Hotham Heights Chalet'. Falls Creek's origins lay in the access provided by the Kiewa Hydro Electric Scheme and leases granted by the SEC for construction of ski lodges, beginning in the late 1940s. Dinner Plain is an architecturally-designed, purpose-built ski village of modern origin.

### **Hydro Towns**

*Mount Beauty 1946*

*Bogong 1939*

These towns were purpose-built in the mid-20th century to house workers on the Kiewa Hydro Electric Scheme. The first was at Lake Guy (Bogong), followed by the large township of Mount Beauty.

### 3.4.2 REMEMBERING SIGNIFICANT PHASES IN THE DEVELOPMENT OF SETTLEMENTS, TOWNS & CITIES

Because of the township diversity in the Alpine Shire, the significant phases in the development of townships varies from place to place. For all townships, the first significant phase was their nucleation, discussed under Theme 4.5.

For the early gold townships of the Ovens valley portion of the Shire, their nucleation and formative years are associated with early alluvial gold workings along the Ovens River and its tributaries, and the Upper Dargo and Cobungra Rivers.



Early gold town - stores at Lower Buckland township in the Buckland valley, now gone (photo from R Kaufman collection, originally from the late Ron Howell)

The permanence added by the transition to reef mining is the second significant phase, where applicable (eg Wandiligong, Bright, Harrietville, Myrtleford). This phase includes consolidation of business infrastructure, and provision of the community and public infrastructure that are yardsticks of community development (eg halls, churches, schools). For the failed towns, their rapid decline is itself a significant phase (eg Upper Dargo townships, Running Creek).

Thereafter, phases vary. A significant phase common to most early townships was the break-up of squatting holdings following the various land selection Acts (particularly the 1869 Act). This strengthened pre-existing townships by increasing

individual local land holdings, enabling significant broadening of the agricultural base and the business/social base of townships.

The connections of the railway to Myrtleford in 1883 and Bright in 1890 had important and demonstrable impacts in their development, in providing transport for agricultural products. The first agitation for this railway service had begun at meetings throughout the district in 1867. At Bright, the impact went further, providing additional tourism opportunities and the involvement of the Victorian Railways in tourism promotion and operation of tourism facilities in the district, most importantly the Mt Buffalo Chalet. The railway also facilitated development of the gold dredging industry that flourished in the Upper Ovens in the early 1900s, by providing transport for heavy pieces of machinery.

The early dredging era (1900-1920) had a strong influence on the townships of the upper Ovens valley, providing employment and stimulating growth of service industries such as carriers, blacksmiths, saw milling, timber cutting etc. It also saw the beginning of the important local softwood industry, with pines planted on dredge tailings. Mid-20th century dredging had a huge impact on Harrietville, where the giant Tronoh Dredge employed a large labour force and was responsible for power connection to the upper valley.

In the relatively isolated Kiewa valley, with its agricultural base and small population, development was slow. Township or community centre nucleation occurred after selection, and often around small schools provided to the farming communities after the government enacted compulsory education in 1872. Many 'towns' appear to be little more than a hall and a school in their earliest years, with commercial premises rarely developed. Nevertheless, there was a strong early sense of community, with socials held at halls, and regular sporting events<sup>275</sup>.

The next significant phase of growth in the Kiewa was the around the end of the 1800s and early 1900s, which saw the erection of the butter factory at Tawonga and creameries at Running Creek and Gundowring, aided by the provision of a road connection over Tawonga Gap to the Bright railhead in 1896. This enabled dairying and associated pig farming to expand.

The third significant phase in the Kiewa valley came with the construction of the Kiewa Hydro Electric Scheme. This brought large numbers of people to the upper Kiewa valley for the first time. The upgraded road connections to the Bright and Bandiana railheads enabled further expansion of the dairying industry, but curtailed pig farming with whole milk being trucked away. The Kiewa Scheme stimulated development of other industries, such as sawmilling. Saw mills were built at Tawonga and Mount Beauty, and the Scheme also provided the road connection for development of the Falls Creek ski field. This helped Mount Beauty to survive as a larger town after being transferred from SEC control when construction of the Scheme was finished. Tobacco growing was re-introduced to the upper valley in 1960, with assistance from the Ovens valley.

Post-war soldier settlement schemes had an impact in several places in the Shire, through increases in local farming population. The most successful of these was at Dederang after World War II, and renewal or addition of community infrastructure followed.

For the many small, agriculturally-based townships and centres of community throughout the Shire that have disappeared, the significant phase of their demise lies in the early to mid 1900s, when improved roads and motor vehicle transport enabled centralisation of facilities such as schools, removing their community focus and identity.

### **Bright**

Bright has had a number of significant phases, which have impacted on the built fabric of the town. From 1859 to the early 1860s, the early settlement was revitalised as quartz mining began. Large numbers of new commercial, residential and public buildings were erected<sup>276</sup>. Town was surveyed and renamed, and the first land sales were held. The Pioneer Mine adjacent to the township was worked on large scale, drawing new residential development south-west, close to the mine and along the Wandiligong road. As Wandiligong reefing grew, it took over from Bright as the focus for development in the Upper Ovens, and was the largest township in Shire from the early 1860s to the 1870s.

In the late 1870s and early 1880s, Bright was enlarged as some people and businesses moved back due to the decline in reefing at Wandiligong, because of the better situation of Bright in the main valley.

Tourism development on an organised basis began in the 1880s, with the formation of the Alpine Club. Township beautification by the planting of

avenues of trees was commenced, and new accommodation premises were constructed. Tourism was assisted by connection of railway to Bright, whereby visitors no longer had to rely on coach connections.



Bright c1900 (from postcard held by R Kaufman)

The early 1900s heralded a prosperous era for the town, as bucket dredging for gold began. High employment in dredging and associated service industries, increased population, and a boom in construction followed<sup>277</sup>. Many new businesses were established. The Mt Buffalo road and the chalet were constructed. Combined with Government promotion, this expanded tourism opportunities for the community.

The 1920s to 1930s saw tourism infrastructure developments at Bright, including construction of stone pavilions, swing bridges and walking tracks. As the 1916 pine plantings matured, softwood milling was begun in Bright in the 1930s. Introduced tree plantings continued, further entrenching the character of the town.

From the 1950s onwards, Bright entered into the modern era of tourism. There have been several phases of infrastructure renewal and accommodation development, some related to large-scale commercial development of local ski fields. There has also been considerable modern residential development. Bright is today the administrative headquarters

of the Alpine Shire, and its second largest township, with a population of 2099 (2001)<sup>278</sup>.

### Dederang

This settlement appears to have nucleated a little earlier than Tawonga, in the late 1870s, after a period of land selection. A post office began in 1877, and a school was opened in 1878. A small store was built where the hotel now stands. Haig & Sons ran another store at Dederang, as well as their flourmill and sawmill at Glen Creek<sup>279</sup>. A Roman Catholic church was built in 1883. In 1886 saleyards were put up and in 1892 a Mechanics Institute and Free Library was opened. The hotel developed from a boarding house that was granted a wine licence in the early 1900s<sup>280</sup>.

Regular horse-race meetings were held in nearly all of the larger townships of the Shire in the 1800s, but the Dederang Races have survived from their humble beginnings in about 1870 to become a feature event in the Shire today. They were held at Steel's Racecourse until 1886, when a new course was constructed at the present location<sup>281</sup>.

It is difficult to assign significant phases to Dederang, other than perhaps the post-World War II soldier settlement scheme, which increased the local farming population. Dederang's growth was slow, reflecting the gradual development of the solid agricultural base of this area of the Shire. It was much closer to the lucrative Yackandandah markets than Tawonga, and had reasonable access to Myrtleford and the lower Kiewa valley markets such as Kergunyah. Always a small township, the influence of the Kiewa Scheme, improved road connections and construction of the Dederang Terminal Station in 1956 are difficult to discern in the fabric of Dederang.

## Freeburgh

Gold diggings probably began at Freeburgh shortly after Bright, but little is known of its early history and it is assumed that it began as an alluvial mining camp in about 1854. Chinese miners were working there in the late 1850s and a Chinese camp was mentioned in January 1860<sup>282</sup>.

The key event in the transformation to a township was the discovery of the first of a number of rich reefs, the Woolshed Reef, in May 1860<sup>283</sup>. Further reefs were quickly found, and two adjacent, vibrant settlements sprang up, each based around a hotel and a crushing machine<sup>284</sup>. The upper township was Woolshed, also known as Woolshed Flat.



Group of men outside the Freeburgh Hotel - no date (photo © Museum of Victoria)

The name Freeburgh appears to have come into currency in the mid-1860s, originally describing the lower settlement situated below the Reliance and many other rich reefs<sup>285</sup>. Woolshed township is referred to until the mid-1870s, after which Freeburgh became the generic name for the area. A school was opened at Freeburgh in 1865<sup>286</sup>. A number of Germans, including Holstein and Brenckmann<sup>287</sup>, were active on the field, probably accounting for the name, and that of Germantown (German Town), a few miles downstream.

With the decline of large-scale reefing operations, Freeburgh struggled on until 1900 as a small community, surviving on alluvial mining, agriculture

and small-scale reef mining. Early 1900s bucket dredging was a boon to the township, providing a large amount of employment. Five dredges operated in the immediate vicinity, and the population rose to 300 to 400 people<sup>288</sup>. However, the area was ultimately devastated by dredging, culminating in the operations of the Freeburgh dredge, which chewed through much of the old township area before closing in 1955. The school was closed in 1948. The modern era has seen significant housing development at Freeburgh.

## Harrietville

Oral tradition has it that Harrietville began as early as 1853, as the New Rush alluvial mining settlement. The population was small, with about 50 people by 1857, but was augmented by an influx of about 500 Chinese miners after the Buckland Riots of that year. Many of these stayed on<sup>289</sup>.

The first significant phase in the town's development came with the opening of rich quartz reefs in 1860. These attracted much attention, and the growing township christened itself Harrietville in May 1860<sup>290</sup>. By the middle of 1861 the town boasted butchers shops and a number of stores, and a school was opened in 1866. Several major reefs were opened in 1860, including the Rose, Thistle & Shamrock which went on to produce the highest recorded gold yield in the Shire. Harrietville also became an important staging point on the Omeo road, and in connection with the Upper Dargo, Grant and Crooked River fields.

While reefing fields at Wandiligong were in severe recession in the late 1800s, Harrietville attracted considerable English capital, and reef mining boomed. A School of Mines was begun, and a number of important new reefs were opened<sup>291</sup>. Harrietville

also saw several large-scale hydraulic sluicing operations developed from the 1890s onwards. Agriculture also grew, with Gow's hop gardens the largest in the Shire. Dredging was successfully introduced in the early 1900s. The Rose, Thistle & Shamrock carried local mining through the mining recession of the 1920s, and into the 1930s before it closed. With the demise of large-scale mining and end of the local hops industry, Harrietville declined.



East end, Harrietville c1900 (N J Caire photo from postcard in R Kaufman collection)

This decline was temporarily reversed with the construction phase and operation of the Tronoh Dredge between 1939 and 1954. While in operation between 1942 and 1954, it provided direct employment for 60 people, and brought electric power to the upper valley<sup>292</sup>. The modern era has seen a growth in tourism service industry infrastructure (including accommodation) and niche agriculture, as well as residential development.

### **Mudgegonga**

The township of Mudgegonga grew out of land selection from the 1870s, and had a strong, early, Italian influence. A post office was opened in 1876, a hotel in 1879, and a church in 1882. The township was surveyed in 1883, and

the first blocks were sold the following year. A school which had been situated a mile to the east was moved into the township in 1884. By 1888 it also had a Hall & Free Library, a sawmill and several residences<sup>293</sup>.

For a long period of time, Mudgegonga, situated in the relative isolation of the Barwidgee valley and based firmly on a solid agricultural base, experienced few external influences other than the vicissitudes of the marketplace. The eventual decline of Mudgegonga township was due to twentieth-century improvements in transport, and the economies offered by centralised facilities in larger nearby centres such as Myrtleford. Today, with the recent closure of the school, only the hall and church remain as functioning community infrastructure.

### **Mount Beauty**

Mount Beauty is a new Victorian town from the mid-1900s, and its significant phases are relatively recent. After its initial construction, the late-1950s to 1960s significantly impacted on the fabric of the town. These changes came about partly through the commercial development of the Falls Creek ski field, which resulted in new service and accommodation infrastructure at Mount Beauty and along the Kiewa Valley Highway at Tawonga South. Mount Beauty was also assisted strongly by the development of new local industries including tobacco growing and the operations of Mount Beauty sawmill, both from 1960. The opening of the new hospital in 1961 was also a help to the community.



The growing Mount Beauty township, 1947 (photo © National Library of Australia)

Modern residential development in Mount Beauty has been concentrated in the northern arm of the town, known locally as 'North Beauty'. Commercial development has been greatest to the west of the town, along the Kiewa Valley Highway at Tawonga South. Today, Mount Beauty is the third largest town in the Shire, with a population of 1632 (2001)<sup>294</sup>.

### Myrtleford

Myrtleford began as a collection of huts and stores on alluvial diggings along the Happy Valley Creek on the Buckland road in late 1853. The first significant phase in the history of Myrtleford was the development of the rich reefs on Reform Hill in the mid to late-1850s, which provided significant employment and focussed development of the commercial centre of the township in its present area. For much of the remainder of that century, Myrtleford's fortunes were tied to that of the reef mining industry. However from the late-1800s, those fortunes began to be more closely related to the



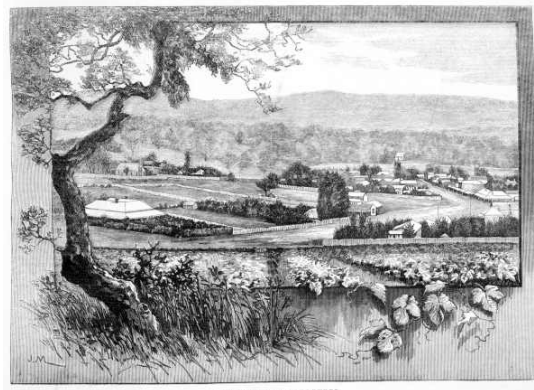
Myrtleford in 1867 (image © State Library of Victoria)

development and vicissitudes of

agriculture, and the growth of the timber industry.

Even though Myrtleford plunged into gloom in the 1880s with the closure of the Reform Mine and the general decline in reef mining, several key events occurred in the 1880s to early 1900s that had important impacts on the town's survival. The first was the railway connection opened in 1883, which provided access to wide markets. The second was the early growth of the hops and tobacco industries in the Ovens and tributary valleys, industries that were later to have an enormous influence on the town. The third was the construction of a creamery in 1893 and its upgrading to a Butter Factory in 1902, that enabled dairying to expand.

The gold dredging industry gave some temporary relief to the town in the early 1900s, providing additional employment and industry, but the next key event was the planting of pine trees on the hillsides adjacent to the town, beginning in 1927. Tobacco and hops growing expanded between the wars, and around the mid-1900s, softwood milling and large-scale hardwood milling began.



Myrtleford c1886 (image © State Library of Victoria)

In the post-World War II period, Italian immigration had a huge influence in the rapid growth of the tobacco

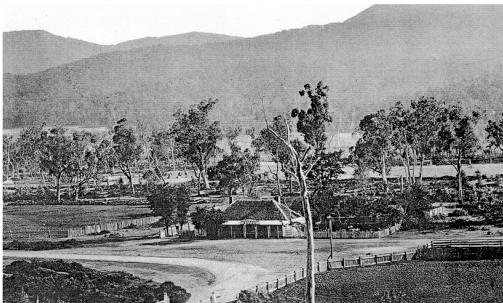


industry, and added a multicultural layering to the township. The concentration of softwood milling to Myrtleford in the 1970s was a boon to the town.

Myrtleford has grown significantly in the modern era to accommodate the principal support, service and supply infrastructure for agriculture and softwood forestry in the Alpine Shire. It is also the largest township in the Shire, with a population of 2515 people (2001)<sup>295</sup>.

### **Porepukah**

Porepukah grew around the crossing place of the Ovens River, on the road to the Buckland River diggings. Never a large town, its survey in 1860 caused much affront to the nearby, large township of Moses Creek (Bright), which had to wait another two years for official recognition<sup>296</sup>. Porepukah survived on mining and agriculture, as well as passing traffic on the road. As organised tourism began in the area, Porepukah took advantage of its position in the shadow of Mt Buffalo and formed an Alpine Tourists Association. Local guides such as Albert Weston were available to take visitors to the summit, and several Porepukah accommodation places were advertising in local newspapers and tourist guides.



Porepukah in the late 1800s (photo from postcard in R Kaufman collection)

Dredging for gold in the early 1900s had a significant influence on the town, with several dredges operating in the

vicinity<sup>297</sup>. The Junction No 1 Dredge worked a considerable amount of ground within the township area<sup>298</sup>, and a number of dwellings were removed. In 1908 it was reported that members of dredging crews occupied most of the residences in Porepukah<sup>299</sup>.

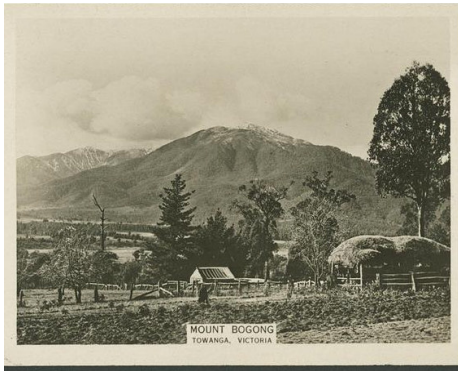
Porepukah benefited later from sawmilling, when firstly the Porepukah Pine Mill began operations, and later Selwyn Timber's hardwood mill. Despite cessation of the milling operations, the town has seen considerable residential development in modern times.

### **Tawonga**

The development of Tawonga, which grew to be one the two largest of the pre-Hydro towns in the Kiewa valley portion of the Shire, can be roughly charted. The settlement appears to have nucleated in about 1880, after a period of land selection. A school was opened in that year, and a public hall about the same time<sup>300</sup>.

It experienced a significant growth phase from the 1890s. One of the first influences is assumed to have been the estimated 60 gold miners who were working reefs on the hillside above the town in the early 1890s<sup>301</sup>. In 1890 in discussion of the proposed road to Bright, it was acknowledged no matter how much the local farmers produced, their only outlet was Yackandandah, 40 miles away, which placed them at a great disadvantage<sup>302</sup>. The road connection to the Bright railhead in 1896 was critical to the upper valley's access to markets. The connection to the new goldfield at Glen Wills at around the same time increased their access to markets, and regular through-traffic<sup>303</sup>. The Bogong Hotel, under the management of Miss Crotty, appears to have started shortly afterwards, around the beginning of 1897. Her

advertisements described the location as at the junction of the Bright, Glen Wills and Yackandandah roads<sup>304</sup>. The first regular advertisements for cattle sales at Tawonga also appear at this time<sup>305</sup>. The butter factory was opened in 1900, stimulating dairying, increasing land values and prompting new, small selections to be offered for sale<sup>306</sup>. Fishing-based tourism in the early 1900s also assisted this township<sup>307</sup>.



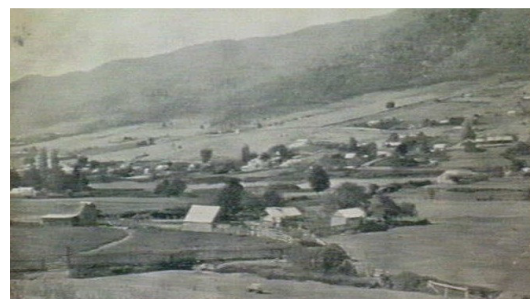
Mt Bogong from Tawonga, 1925 (photo © National Library of Australia)

The next significant phase began in the 1940s, when the State Electricity Commission used the township as a base for their operations on the Kiewa Hydro Electric Scheme. New administrative and residential buildings were added, and a new hospital was opened in 1949, built by the SEC at a cost of £45,000. Sawmilling in the town began on a large scale in the mid-1940s, and the Tawonga Mine provided additional employment and several houses from 1946 to 1951<sup>308</sup>. A caravan park was opened in 1958, and tobacco growing was re-introduced in the same year. However, the town suffered as hospital operations were transferred to Mount Beauty in 1961<sup>309</sup>, and the sawmill was closed in 1980. Modern urban growth has shifted to Tawonga South, adjacent to Mount Beauty and along the Kiewa Valley Highway.

## Wandiligong

Wandiligong was known as Growlers Creek until 1872, and was also sometimes referred to as Morses Creek upper township and Morses Creek. It appears to have had its beginnings in 1854, as an alluvial gold mining camp<sup>310</sup>. In 1858, Growlers Creek was described as a small diggings, inhabited by “a set of as merry fellows as ever threw care to the winds”<sup>311</sup>.

The discovery of rich reefs at the end of the decade saw a rapid and massive transformation of the settlement. From 1860, it became the principal focus of commercial development in the Shire<sup>312</sup>, and for a number of years the largest township in the Shire. Peak mid-1860s population is sometimes quoted as high as 2500<sup>313</sup>. Detailed mining population figures for early 1864 show almost 1000 miners working in the vicinity of Wandiligong, later stabilising to about 600, so a township of some substance is indicated<sup>314</sup>. Stores, hotels and other businesses stretched along Morses Creek Road, and a number of stamp batteries (crushing mills) operated within the town. The Oriental Mine, the largest of dozens of working mines around the town, employed upwards of 200 men at its peak<sup>315</sup>.



Wandiligong c1909 (photo courtesy D Hynes)

The decline of Wandiligong was long and slow. Nevertheless, in the late 1800s the community had become well established and was very active, with social, sporting and horticultural clubs. Fruit orchards and nut groves were

grown, as well as tobacco, hops and a variety of other crops. As reef mining ebbed, the population dropped from about 1100 to about 650 people between 1881 and 1891. This decline was arrested somewhat in the dredging era of the early 1900s, which provided considerable employment in the Upper Ovens and stimulated agriculture. Population was around 800 in 1905, but had dropped to 360 by 1921, and gradually decreased to 132 in 1966<sup>316</sup>. Modern development has seen a substantial rise in population, and new housing construction. The modern era has also seen transformation of the character of the place, from a spread out 'ghost town' of paddocks and old cottages, to a 'leafy village'.

### **Architectural Character of the Townships**

The architectural character of the townships of the Alpine Shire that had their beginnings in the nineteenth-century is very much tied to their history. In their formative years, the valleys were relatively isolated and remote places, and local newspapers of the times regularly complained about the lack of government interest in the areas<sup>317</sup>. This indifference translated to construction of very basic government infrastructure, and up to 1900, the Wandiligong School represented the highest investment, followed by the very modest brick courthouse in Bright, and the Bright and Myrtleford schools. Nineteenth-century post & telegraph offices were basic weatherboard buildings, and sometimes run from private houses or stores. School buildings outside Myrtleford, Bright and Wandiligong were weatherboard and basic.

Community infrastructure was also relatively basic, and only some of the churches in the larger centres, and the Catholic Church at Dederang, received

any real architectural consideration. The first offices of the old Shire of Bright was a modest single-room brick building, and with a few additions, it was used until it burned down in relatively modern times. Early commercial infrastructure was similarly basic. Some commercial premises received attention in later periods of boom, but there were no grand emporiums or market buildings.

In housing, the Upper Ovens portions of the Shire, which were the most heavily populated in the early years, provide an insight into the evolution of the urban character. In the 1850s alluvial mining camps on the Ovens and Buckland Rivers, and Morses Creek, the principal form of habitation appears to have been tents and rough slab or log huts. As reef mining was getting into full swing, the conversion of the huts to weatherboard houses is chronicled<sup>318</sup>. In 1861, about 60% of the 398 dwellings in the Upper Ovens (Bright, Wandiligong & Ovens River) still consisted of slab or bark huts, or tents. Ten years later in 1871, for Morses and Growlers Creek, these contributed only about 30% of the 506 dwellings, and were almost exclusively occupied by Chinese residents<sup>319</sup>. However, only one of the 292 dwellings on Morses and Growlers Creeks was constructed of brick or stone<sup>320</sup>. That after nearly twenty years of settlement only one house had been constructed of durable materials speaks volumes for the poor survival rate of early residential fabric of the townships, and perhaps for the residents' own view of their occupancy of the valleys of the Shire.

For all the enormous gold production of the mines and diggings of the Shire, little seems to have been invested in substantial private, commercial or community infrastructure. Many of the leading mining entrepreneurs left the district after 'making their pile', and

invested their money elsewhere. Others re-invested in mining, with diminishing returns. A lot of the profits of the major mines of the Shire left the district as dividends paid to distant investors. It may also be that the nature of the orebodies of the Shire, as thousands of individual and generally small reefs, inhibited the accumulation of individual wealth.

The evolution of the residential fabric of the townships has been influenced by the ebb and flow of mining, which saw volatile population levels within the broader trends of cyclical boom and decline. This impermanency of occupation had important impacts, given the physical nature of the dwellings. Unoccupied houses rapidly deteriorated, and there is considerable evidence that houses and even commercial premises were moved from one area to another. Materials from derelict houses were often salvaged to repair other houses<sup>321</sup>.

The late nineteenth and the twentieth-century had significant impacts in the urban character of towns. At Bright, significant infrastructure renewal and development occurred in the 1890s, early 1900s, 1920s, and from the 1950s into the modern era, with intervening periods of stagnation or decline. In Myrtleford, some significant infrastructure renewal occurred in the 1880s and later periods, but the post-

World War II period has seen virtually a complete re-modelling of the town. This period saw it thrive on the back of a burgeoning and lucrative tobacco industry, and the concentration of the Shire's support, service and supply infrastructure for agriculture and forestry within the township. In housing, Californian bungalows were common although not necessarily typical at Myrtleford in 1940s-50s building. This style is not represented at Bright.

All these influences have combined to give a character to the towns that is very different to some of the other early gold towns of the region, such as Beechworth, Chiltern and Yackandandah. Because of the non-durable materials used in construction and the periods of boom and decline, the townships show a blend of the physical fabric of the various significant phases of their development, at both a macro and, with the exception of the new estates, micro level. Fabric from the second half of the twentieth-century overwhelmingly dominates, and missing are well-preserved precincts representative of the significant historical phases.

## 3.5 GOVERNING

### 3.5.1 ADMINISTERING AUSTRALIA: CONSERVING FRAGILE ENVIRONMENTS (ASSESSING SCIENTIFICALLY DIVERSE ENVIRONMENTS)

A large proportion of the area of the Alpine Shire is made up of National Parks, consisting of Mount Buffalo National Park and a part of the Alpine National Park. Fundamental to the conservation of the rare Alpine environments contained in these Parks, particularly in the Main Divide, was the understanding provided by a huge body of scientific information obtained over a long period of time. Today, this information is being constantly added to, and influencing both our understanding and practical management of the Parks<sup>322</sup>.

The first scientific surveys conducted in the Shire were the visits of Ferdinand von Mueller, the Victorian Government botanist, to Mt Buffalo in February 1853 and Dinner Plain, Mt Hotham and Mt Feathertop in December 1854. Von Mueller undertook comparison of species he found to those known from high altitude and latitude areas such as Antarctica and New Zealand, collection of nearly sixty plant species new to science, and provision of type plant specimens to Melbourne's National herbarium. His study made a significant contribution to the first publication on Australian flora entitled *Bentham's Flora Australiensis*, published between 1863 and 1878<sup>323</sup>.

Late in 1862, George Neumayer, Director of the Melbourne Flagstaff Observatory, made the first systematic survey of the magnetic, hydrographic & meteorological properties of the south-eastern Australia. This included a visit to the Alpine Shire where 95 readings of magnetism were made at Flourbag Plain, Mt Feathertop, Bright, Buckland Camp and Barwidgee<sup>324</sup>.

James Stirling, of the Geological Survey of Victoria, regularly visited the Australian Alps between 1875 and 1888, collecting 1019 plant species from the alpine region, many of which

were from the Alpine Shire. He compiled this extensive research into a census of the flora of the Australian Alps<sup>325</sup>.

The first of many scientific surveys of the geology of the Alpine Shire was undertaken by Robert Brough Smyth of the Geological Survey of Victoria in 1875, examining the secondary (alluvial) gold deposits of the area, including the deep leads of the High Country. Numerous surveys were subsequently undertaken by the Geological Survey. These included Howitt and Murray's systematic studies of the elevated portions of the Shire, including the Dargo High Plains and the southern Bogong High Plains<sup>326</sup>.

James Stirling established a climatic recording station at Mt St Bernard in 1882. The station took daily readings of temperatures, rainfall, wind speed and direction, and incidence of fog and frost. With the assistance of the St Bernard Hospice owner, Bill Boustead, Stirling undertook readings through the 1880s<sup>327</sup>. In 1886, Robert von Ledenfield and James Stirling undertook the first systematic study of the inter-relationships between elevation, vegetation and geology of the High Country<sup>328</sup>.

In January 1890, the Australasian Association for the Advancement of

Science visited Myrtleford, Bright, Mt St Bernard & Mt Hotham as a post-conference tour of their second meeting. The party was escorted to the Mt St Bernard and Mt Hotham area, led by James Stirling and attended by 54 people, mainly scientists and academics, including Ferdinand von Mueller. The meeting represented a significant gathering of key personnel and involved the exchange of scientific information and ideas that had been collected in the previous four decades<sup>329</sup>.

Between 1899 and the 1930s, the Field Naturalist Club of Victoria members visited and reported on various Alpine areas within the Shire, including Mt Buffalo, Mt Hotham, Mt Feathertop, Mt Bogong and the Bogong High Plains. They continued the work of the previous scientists, collecting alpine plants, invertebrates, fossils, etc. and making numerous observations on the biogeography and condition of the high country environments<sup>330</sup>.

In 1910, a Lands Department assistant surveyor undertook a description of the physiology, soils, tree lines etc of the Bogong High Plains area. Included was an assessment of the suitability of the area for grazing purposes<sup>331</sup>.

The first of the hydro-related scientific surveys was carried out in 1910 by the Victorian Hydro-Electric Company. This was an investigation of the water resources of the Upper Kiewa Valley and Bogong High Plains<sup>332</sup>. The State Electricity Commission of Victoria continued these surveys from the 1920s onwards, monitoring streams, rainfall, runoff, snowfall and snow characteristics. Because of the vulnerability of the operation of the Scheme to sedimentation, a variety of studies looking at catchment influences, insect damage and vegetation health were conducted<sup>333</sup>.

A number of later studies focussed on the effects of grazing by introduced animals on alpine and subalpine ecology. Maisie Fawcett (later Stella Carr) collected extensive data on vegetation type and cover in areas both grazed and excluded from grazing between the 1940s and '70s<sup>334</sup>. This experimental ecological work has been continued to the present time by various Government Departments who have succeeded the Soil Conservation Authority. This is probably the longest continuously-monitored ecological study in Australia.

*Text for this section provided by Dr Ruth Lawrence*



Engraving of the visit of the members of the Australasian Association of the Advancement of Science to the Australian Alps, 1 January 1890 (image © State Library of Victoria)

### 3.5.2 ADMINISTERING AUSTRALIA: CONSERVING AUSTRALIAN RESOURCES

Some 92% of the area of the Alpine Shire is Crown Land. Because of that dominance, public land management has been a strong theme in the development of the Shire, providing significant employment in the protection and management of the forest resources within the Shire. Active management of forested Crown land in Victoria is really a phenomenon of the twentieth century, beginning with the *Forests Act* 1907. In the Shire, public land management grew as a strong theme from the 1920s as new pine plantations were developed. Devastating bushfires in 1926 and particularly 1939 saw more resources dedicated to fire prevention and suppression, and the development of a large-scale hardwood logging industry from around the mid-1900s saw a further expansion of forest management activities in the Shire.

#### Preamble

Government influence in the squatting era of Alpine Shire was limited to the Commissioner of Crown Lands, based in Benalla. H Smythe, was the first of these, holding office from 1839 to 1853<sup>335</sup>. The Commissioner, however, was only concerned with pastoral occupation of Crown lands.

The gold era brought a new level of government influence to the Shire. Victoria's first *Goldfields Act* of January 1852 created a new class of government official, the Goldfields Commissioner. Victoria's third *Goldfields Act* of June 1855 abolished the position of Commissioner, and established the powers of 'local courts', with an appointed chairman, and 9 members elected by miners in the district. These courts could frame local mining rules. The colony was divided into five districts, and Alpine Shire fell within the Beechworth Mining District. Wardens were appointed to carry out the rules of the local courts. The wardens' Crown land powers extended to mining titles and water, while other Crown land tenures and timber powers remained with the Department of Crown Lands (later Lands Department).

In response to rapid depletion of timber resources during the first decade of the gold rushes, the Victorian government

in 1861 passed the first legislation which enabled it to proclaim reserves for the preservation and growth of timber. In 1865 the President of the Board of Lands in Victoria presented a Special Report on "The Advisableness of Establishing State Forests", but no real progress was made until 1897, when a Royal Commission was established into forest conservation in Victoria.

#### Forest Management from 1907

Finally, in 1907, the *Forests Act* was passed and the State Forests Department established, beginning the formal management of the State's forests. In 1918, the Forests Commission was created<sup>336</sup>. The Commission managed State Forest, while the Lands Department managed other Crown lands.

Forest management in the Alpine Shire from 1907 until 1918 had been constrained by lack of funds and manpower, and little organised fire protection had been attempted. The new Commission gradually introduced a more scientific approach, and brought in new tools such as knapsack and pump sprayers. They also increased expenditure on water supplies at strategic locations, and expansion of track networks. The first fire-spotting tower in the region was opened at Mt Stanley in 1932.

The devastating 1939 bushfires had a major impact on fire management in the State, and in 1944 the Forests Commission was given complete control of fire prevention and suppression on Crown land. Subsequently, the Commission greatly expanded vehicle track networks, built dugouts for fire shelter, and erected further fire-spotting towers. By the mid-1940s, a tower had been erected on Mt Porepunkah. Another tower was built at Clearspot near Bright, and a lookout (cabin) at Mt Hotham. Along various forestry tracks within the Shire, particularly strategic ridgelines adjacent to pine plantations, small concrete water supply ponds were later constructed for firefighting<sup>337</sup>. These are referred to locally as 'wallaby-baths'.

In the Kiewa valley, the State Electricity Commission's Forest Division took on a de facto land management role, and erected a fire-spotting tower close to Mount Beauty in the late 1940s. This was superseded by another built on Big Hill in the summer of 1962/63. The Mt McKay tower was built in the 1961/62 summer<sup>338</sup>.

In the post-WWII years, noxious weed control was carried out by Lands Department crews, and Forests Commission crews working in local plantations. The outbreak of St Johns Wort at Bright, affecting 35,000 acres of land, was finally brought under some degree of control after release of

a beetle by the Lands Department in 1950<sup>339</sup>. With the growth of the hardwood logging industry in the Shire after World War 2, supervision became another important element of the Commission's work.

The Commission's Myrtleford area office and depot were situated at Ovens, opposite the Happy Valley Hotel. Bright had an office in Bakers Gully Road, and two depots serving the separate plantations and hardwood divisions, in Park Street and Star Road respectively. The Forests Commission merged these divisions in 1958, centralising operations to the Park Street depot. Lands Department offices were situated in Bright and Myrtleford<sup>340</sup>.

In 1957 the National Parks Service was created, taking over management of National Parks in the State. It became the Victorian National Parks Service in 1971. The Forests Commission, however, maintained control of fire protection in those areas. The separate roles of the Forests Commission, National Parks Service and Lands Department were maintained until the creation of the Department of Conservation, Forests and Lands in 1983.

### **Conservation Movements**

The progress towards conservation of the Alpine environments contained within the Shire is charted in the following section.



### **3.5.3 ADMINISTERING AUSTRALIA: CONSERVING FRAGILE ENVIRONMENTS (APPRECIATING THE NATURAL WONDERS OF AUSTRALIA)**

The Alpine Shire contains the highest altitude areas in the State, including Victoria's highest mountain, Mt Bogong, and 13 of the State's highest peaks. It has Mount Buffalo National Park within its boundaries, and the highest altitude areas of the Alpine National Park. The township of Bright has the headquarters of administration for the Mount Buffalo and Alpine National Parks. The progress towards conservation of the rare Alpine environments within the Shire is a significant story in State and National terms.

The development of the National Parks can be charted through history, and the two modern National Park areas within the Shire show very different origins. The Mount Buffalo National Park, one of Victoria's first two National Parks declared in 1898, was created through local agitation, and based principally on protection of a very scenic and valuable tourism asset. While the first rumblings for creation of a Park on the Alpine areas of the main range were driven by public recreation considerations, the ultimate Park declarations were driven by conservation interests outside the Shire, in relatively modern times.

#### **Mount Buffalo National Park**

The need to protect special natural places in the Colony of Victoria was recognised at a relatively early time, and the Ferntree Gully reserve, popularly known as a 'National Park', was declared in 1882. Ten years later, 600 acres of land at Tower Hill in Western Victoria was reserved under the *Tower Hill National Park Act*, sponsored by a local member of Parliament<sup>341</sup>.

Mount Buffalo had long been recognised as an outstanding natural feature, and a large oil painting of the mountain by Nicholas Chevalier had been purchased by the Victorian Government in 1861. Ferdinand von Mueller had visited the Mt Buffalo plateau in 1853-4, and collected numerous plant species. The summit of Buffalo was visited occasionally over the years by interested groups, but the formation of the Bright Alpine Club in the 1880s signalled the start of a strong push for tourism development of the mountain. A new, shorter track was cut to the summit, and a number

of local people acted as guides for visitors to Buffalo.

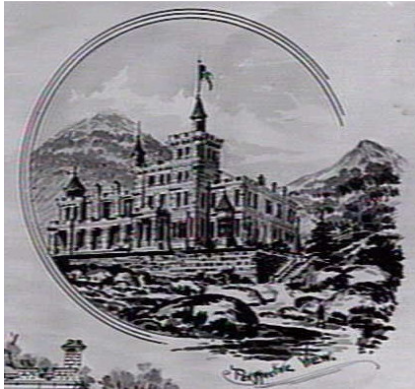
In December 1888, the Bright Progress Committee wrote to Secretary for Lands, requesting certain land on the mountain be reserved as Public Park. Despite a favourable response from the Surveyor-General, action did not immediately follow. In the meantime, tourism development continued. In 1890, Manfield's Temperance Hotel was built at the base of the mountain. A hospice was built on the plateau in 1891 by Ted Carlile, to house his tour parties, and tourism on the mountain increased in the 1890s<sup>342</sup>.

In 1897, George Smith, Bright Shire Secretary, wrote to the Beechworth office of the Lands Department, concerned at damage being done on Mt Buffalo by timber cutters. Local officers regarded the proposed National Park status as unnecessary, but George Perrin, Conservator of Forests, thought it was a good idea. Concerns were expressed by the timber industry, because the Eurobin Falls area supplied the timber requirements of deep lead gold mining

industry at Rutherglen & Chiltern. Despite this opposition, an area of 2880 acres around Eurobin Falls was dedicated as a temporary National Park on 31 October 1898<sup>343</sup>. Wilson's Promontory was temporarily reserved as a National Park in the same year, after about fifteen years of lobbying by the Field Naturalists Club of Victoria.

Development of visitor facilities on Buffalo continued. In 1900, Manfield's first lodge was built at the Gorge, and after negotiating a 3-acre licence, the family built a second lodge<sup>344</sup>. In 1908, a further temporary reserve of 21,300 acres was declared, covering the entire plateau, and the formed road to the summit was opened with great fanfare<sup>345</sup>.

Government Chalet was built near the



Grand vision for the Buffalo Chalet, c1890  
(image © State Library of Victoria)

Gorge in 1910, and operations were initially overseen by the Victorian Railways before they took over management in 1924<sup>346</sup>. Images of the spectacular scenery at Mt Buffalo became familiar throughout the State because the promotional work carried out by the railways. Skiing and snowsports which previously had been largely an added bonus to the summer experience grew rapidly.

The two temporarily-reserved areas and an additional 1300 acres were finally gazetted in 1948 as a National Park of 27,280 acres<sup>347</sup>. Following a sustained campaign by the Field

Naturalists Club of Victoria, grazing on the plateau ceased in 1958<sup>348</sup>. On the recommendation of the Land Conservation Council of Victoria, the area of the National Park was expanded to 31,000 hectares in 1980<sup>349</sup>.

### Alpine National Park

In 1868, an article in the *Australian Illustrated News* recognised the recreational potential of Bogong High Plains<sup>350</sup>. Governor Bowen visited Mt Hotham and Mt Feathertop in 1874, and the 640-acre Diamantina Springs Public Reserve near Mt Hotham was declared<sup>351</sup>.

Following a review of land classifications that led to the *Land Act* of 1884, an additional category was created - the Bogong High Plains Green Area was designated, diverging from usual land classifications<sup>352</sup>. This allowed grazing blocks under an annual licence. James Stirling, in his role among many as Omeo Land Officer, proposed preserving portion of Bogong High Plains as Public Park lands in 1886, recognising the unique features of the plateau and the potential demand for "summer residences" to enjoy its attractions<sup>353</sup>.

In the 1880s and 1890s, high country tourism promoted from Bright. In the Main Divide, snow recreation was undertaken from St Bernard Hospice. From the 1920s onwards, skiing at Mt Hotham and adjacent areas was heavily promoted, and this was the beginning of modern ski industry. Cross country skiing from Hotham across to the Bogong High Plains was introduced by pioneering skiers. The Victorian Railways, who already operated Mt Buffalo Chalet, took over running of the Feathertop Chalet in 1928 and Hotham Heights Chalet in 1933. Their promotion exposed a broad audience to the attractions of the High Country. The Skyline horse-

riding tours, organised by Victorian Railways and conducted by local cattlemen, proved a popular way of seeing the area<sup>354</sup>.

In the late 1930s there was some agitation for reservation of an alpine national park by conservation groups, but no formal action followed. In 1949, the Town & Country Planning Association of Victoria proposed a 500,000-hectare Victorian Alpine National Park in the north-eastern highlands. Their report, the result of four years work, was investigated and endorsed by the Parliamentary State Development Committee in 1951. The Committee also suggested that the proposed area be extended to meet the New South Wales border<sup>355</sup>. But action was many years away.

Meanwhile, lodge development went on at Falls Mt Hotham Creek in the 1940s and 1950s, as the ski villages began to grow. Interest in the High Country was maintained by bushwalking and ski clubs, and the

Victorian National Parks Association (VNPA).

In 1969, the VNPA presented a detailed submission to the Victorian Government, for the establishment of an Alpine National Park. The VNPA amplified their case in 1974, in their book "The Alps at the Crossroads". This contained a detailed argument for the creation of an Alpine National Park that extended from Mt Baw Baw to the New South Wales border<sup>356</sup>.

In 1979, the Land Conservation Council (LCC) recommended creation of a series of National Parks & other reserves in alpine areas of eastern Victoria. The Bogong National Park was one of a series of parks and reserves declared. In 1983, the LCC further recommended that parks be extended and linked to form a large Alpine National Park. This was accomplished on 2 December 1989, when the Alpine National Park was formally proclaimed<sup>357</sup>.

## 3.6 PEOPLING AUSTRALIA

### 3.6.1 MIGRATING TO SEEK OPPORTUNITY

Migration is an important theme in the development of the Alpine Shire, and the contribution of migrants can be broken down into a number of significant phases.

#### Gold Rush Migration

Gold rush diggers settled in great numbers in the previously sparsely-populated regional areas of Victoria. They brought their own particular skills and experience with them, and their influence in the State's development was substantial.

The gold rushes brought the first substantial populations into the Shire. These people, predominantly overseas migrants to the colony, initiated the Shire's important gold mining industry, formed its first townships, developed its first community infrastructure, pioneered intensive agriculture in the valleys, and to a large degree brought closer settlement to all parts of the Shire when land became available under later land selection Acts. The 1857 census revealed that in the Beechworth Warden's District, only 6.4% of the population was born in Victoria, with 5.2% born in other Australian colonies. An overwhelming 88.4% of the population was born overseas - 52.9% in the British Isles, 25.2% in China, 5.4% in Europe, and 2.1% in America<sup>358</sup>.

The impact in the Ovens valley portion of the Shire, where the richest of the Shire's goldfields lay, was rapid and dramatic. In the Kiewa valley and areas such as Mudgegonga, the influence of gold rush migration was generally more subtle. The land selection acts of the 1860s, driven by the massive increase in Victoria's population during the 1850s, enabled break-up of squatting holdings in these

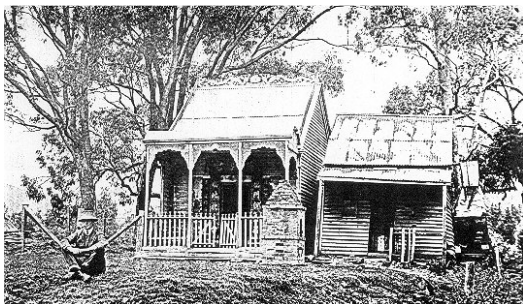
areas, and development of closer settlement.

Cornish miners used their extensive home-grown mining skills in the early development of reef-mining in goldfields throughout Victoria and Australia. In the Alpine Shire, their influence appears to have been strongest at Wandiligong, the premier early reefing field. But even there, their influence is difficult to quantify. Certainly, some of the leading mining identities were Cornish. These included Johnson Stephens, a Cornishman who opened the Woolshed reef in 1860, and engaged a Cornish engineer to design the first crushing plant using ideas from the tin mines of Cornwall. Edmund Gill, known as 'Captain Gill' in the Cornish tradition, and Charles Fraser, of 'Fraser's Mill' fame, were two other Cornishmen who brought of wealth of overseas mining experience to the opening of the Wandiligong reefs. A number of Cornish miners were brought to Wandiligong to develop the Wallaby mine, and many Cornish names are to be found in the mines of the area<sup>359</sup>. These include the Cornish United, Penzance, St Ives Consol and Gunislake<sup>360</sup>. Reefing had become the major industry of the Shire by the 1860s, and continued to played a strong though diminishing part well into the 1900s. Reef mining played a fundamental role in the course of the development of the Ovens Valley portion of the Shire, because it entrenched populations in the area.

Early German diggers in the Ovens valley helped pioneer viticulture and orchards, and left the township names of Germantown and Freeburgh as permanent records of their presence. In a similar fashion, dozens of nationalities are enshrined in the names of the quartz mines of the Shire. There are abundant examples, including Scotchman's Reef at Bright, English & Welsh at Wandiligong, German Emperor at Porepunkah, Denmark Reef in the Buckland, Canadian Reef at Harrietville, California Reef at Tawonga, Helvetia Reef at Harrietville, Lisbon Reef at Germantown, and the Italian, Prussian and Ulster reefs at Wandiligong<sup>361</sup>.

### Chinese Migration

Chinese miners arrived in large numbers in the goldfields of the Shire from mid-1850s. They were overwhelmingly the dominant national group in the population of some areas of the Shire in the late-1850s and early 1860s. Chinese camps grew or were formed at many places in the Shire, including Myrtleford, Running Creek, the Buckland Valley, Bright, Wandiligong, Germantown, Freeburgh and Harrietville. The Chinese pioneered market gardening, tobacco and flax growing in the Ovens Valley portion of Shire in 1850s and 60s, to satisfy local demand. The Chinese also grew tobacco at Tawonga, Dederang and Gundowring in the Kiewa valley.



Chinese Joss House at Harrietville - no date (photo held at Harrietville Historical Society Museum, supplied by P Pelly)

Later in 1800s, European landholders entered into share-farming with Chinese, using their skills and experience to expand the tobacco and hops growing industries in the Ovens valley portion of the Shire, and extending to areas outside the Shire, such as King Valley. This skilled Chinese labour was critical to the early success of these fledgling cropping industries, which later had such an enormous impact on the economy of the Shire.

Despite the prejudice shown against the local Chinese, there were several success stories, and some Chinese-owned operations, such as Panlook's hop gardens at Eurobin, became major agricultural enterprises.

The infamous Buckland Riots of 1857, when some 2000-2500 Chinese were driven violently from the Buckland Valley, was a signal event in local, State and National history, and its ramifications echoed down the years. At a local level, it crystallised the growing antipathy and prejudice of the European miners towards the Chinese, and brought structural changes in the administration of the district. A follow-up riot in Moses Creek (Bright) in 1859 resulted in the formation of the largest declared Chinese camp to operate in the district, housing an estimated 1000 people at its peak<sup>362</sup>.

At a State level, the Buckland expulsion was the largest race riot experienced in the history of Victoria, and forced the government and communities to address the "Chinese question". Legislative changes to Chinese immigration followed rapidly. The anti-Chinese riots at the Buckland River and Lambing Flats (NSW) are widely regarded as key early events in the evolution of an immigration policy that eventually became known as the "White Australia Policy"<sup>363</sup>.

Few Chinese people stayed on in the Shire much beyond 1900. Many who had arrived in the early years were aging, and died as lonely old men in the camps, or in rough huts along the rivers. Many more had left the district, seeking opportunity elsewhere, or returning to China. However, descendants of the some of the handful who had taken European wives still reside in the Shire, surrounded by the bounty that their forefathers had laboured so hard to develop.

### **Land Boom Migration, 1890s**

The second major phase of migration into Victoria was the so-called “land-boom” era of the 1880s to 90s. No data has been found on any impacts of this era on the Alpine Shire.

### **Italian (Southern European) migration**

The Italian or Southern European influence in the Shire has been substantial, and today there are many people of Italian or Southern European origin living throughout the Shire, in places such as Myrtleford, Mudgegonga, Eurobin, Porepunkah, Bright, Wandiligong, Freeburgh and the upper Kiewa Valley. Their influence has been strongest in the development of cropping industries, particularly tobacco, in the Shire since the 1920s.

The first Italian migrants came to the Ovens Valley and other regional goldfields during the gold rushes of the 1850s, as a small segment of the many nationalities represented. As land selection became possible, a group of northern Italian gold miners, De Piazza, P Pini, V Pini, Saligari and Osmetti, who had been working on local goldfields, took up significant land holdings at Mudgegonga<sup>364</sup>.

After World War I, a second wave of Italian migrants moved into the Ovens



Espresso machine in the Savoy Club at Myrtleford in 1955 (photo © National Library of Australia)

Valley, working initially as sharefarmers, before taking up land at places such as Eurobin, Porepunkah, Buffalo River and Myrtleford. Local families such as Cavedon, Michelini and Dalbosco were represented in this group<sup>365</sup>.

After World War II, a third and more substantial wave of Italian and other European migrants came to the Shire, and many, having become familiar with the area, stayed on. Many Italian settlers were sponsored migrants, who came to the Shire on the recommendation of family or friends who were already living in the area. Some of the migrants came to Australia under assisted immigration agreements, and their numbers were augmented with refugees, principally from the Baltic states<sup>366</sup>.

Some farms in the Shire engaged migrant labour from the Bonegilla Migrant Reception Centre, and migrants were also engaged in forestry, sawmilling and mining. Those engaged in plantation work stayed in special camps within the Shire, the ‘Balt camp’ at Bright, and camps at Ovens and Merriang, introducing many migrants to the area<sup>367</sup>. Work was arranged from Bonegilla under an employment allocation scheme<sup>368</sup>.

A large number of migrant workers were employed in the construction of the Kiewa Hydro-electric Scheme, and

some settled in the district. Earlier, many people of Italian origin had been sent to the area for internment at the Whorouly camp during the war years, and some, having become familiar with the area, stayed on<sup>369</sup>.

Some migrants became involved in share-farming, eventually purchasing their own land. They played a significant role in the post-WWII expansion of the tobacco growing industry, and by the time of the 1961 Census, 793 of the 1025 tobacco growers in Victoria were Italian-born. With quota reductions, these people also led the more modern diversification into other cropping, including the re-introduction of viticulture into the valleys of the Shire<sup>370</sup>. In a sense, they echoed the nineteenth-century Chinese contribution. The Italian and other European migration has also added a strong multicultural layering to some towns of the Shire, particularly Myrtleford, which has been cited as the best example of integration of an ethnic group in Australia<sup>371</sup>.

### **Skiing**

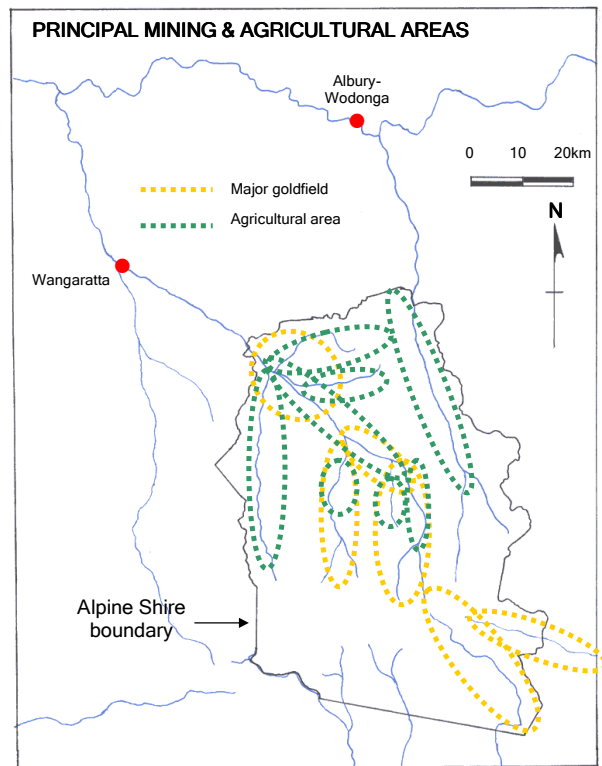
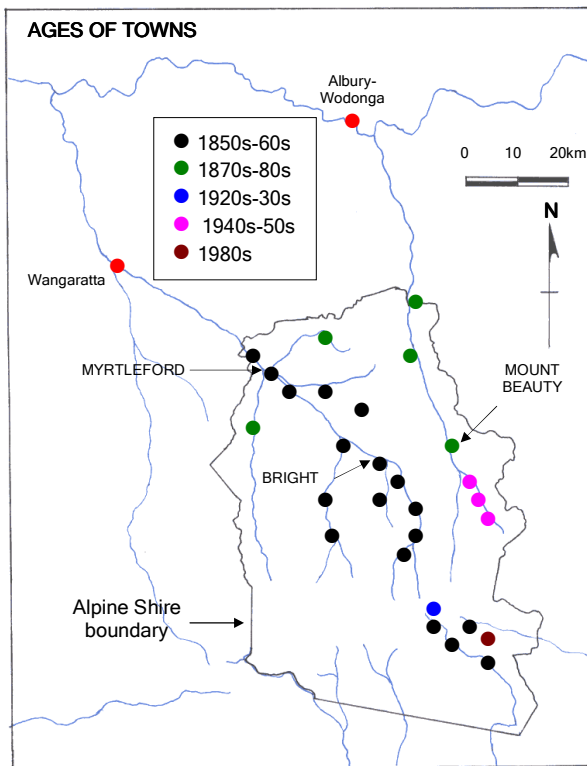
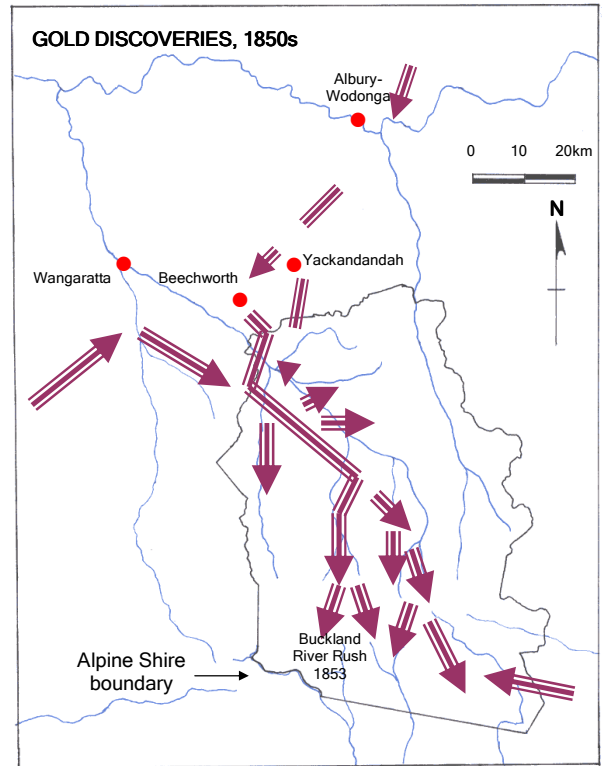
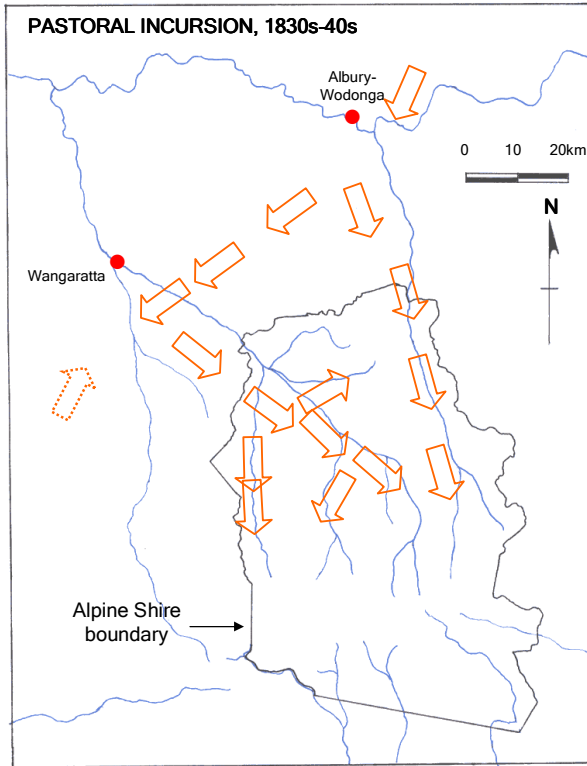
Migrants from Europe have also played a significant role in skiing and ski field development in the Shire, as they have throughout the snowfields of South-Eastern Australia. In 1935, the Victorian Railways enticed Franz Skardarazy, a ski instructor from

Austria, to give lessons at Mt Buffalo. Franz's lessons proved very popular, and two more European instructors were brought out. Unfortunately, these men left at the outbreak of World War II, but use of overseas instructors became standard practise. After the war, Ollie Polasek, a Czech migrant, worked as a ski instructor at the Chalet in the 1950s, and later played a key role in the development of Tatra at Mt Buffalo<sup>372</sup>.

European migrants also figure prominently in early ski exploration, and pioneer sporting skiing. Eric Johnson (Eric Johnson Gravbrot) was a Norwegian skier who had a significant influence in skiing at Mt Hotham. He became something of a legend of the mountain for his exploits from 1943 onwards in carting skiers and their equipment up the Bon Accord Spur. Earlier, he was one of the pioneer users of Langlauf skis in the Victorian Alps<sup>373</sup>. Nils Lied, another Norwegian skier, was a significant contributor from 1952, as manager of the Hotham Heights Chalet for the Ski Club of Victoria. He later became an Antarctic expeditioner<sup>374</sup>.

At Falls Creek, migrants from Europe who were working on the Kiewa Hydro Electric Scheme played an important role in the early development of the ski field<sup>375</sup>.

# HISTORY MAPPING – ALPINE SHIRE







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**Data:**

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## APPENDIX 2 – CONVERSION TABLES

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### Weight

1 ton = 1.016 tonnes  
1 hundredweight (cwt) = 50 kilograms, approx

### Troy Weight for Gold

1 ounce = 31.103 grams  
(1 tonne = approx 32,500 troy ounces)

There is a modern tendency in Australian histories to express historical gold production in kilograms. However, the Troy Ounce remains the international unit for gold, and the price is quoted in \$US per ounce.

### Length

1 Mile = 1.6 kilometres  
1 Yard = 0.9 metres = 3 feet  
1 Foot = 30 centimetres, approx

### Area

1 acre = 0.4 hectares

### Capacity

1 gallon = 4.5 litres

### Power

1 Horsepower (Hp) = 1.33 kilowatts (Kw)

### Currency

It is difficult to meaningfully convert currency. The unit quoted in the history is usually the pound (£) which was divided in 20 shillings (s), each of which was divided into twelve pence, or pennies (d). Sums of money were written £/s/d – eg two pounds, ten shillings and sixpence was written £2/10/6, 12 shillings was written 12/-, sevenpence was written 7d, etc.

### Gold

Up until about 1930, an ounce of gold was worth about £4. This means, for instance, that an early mine quoted in the history to have produced 30,000 ounces actually yielded about £120,000 worth of gold. Today, gold is valued at about \$550 per ounce, so it would be easy to assume that a simple conversion (550 x 30,000) would give the modern day dollar value (\$16.5 million).

This is not necessarily the case, and there are a number of other ways of assessing value. One useful way might be in comparing the value in terms of wages of the era. An ounce of gold today is worth somewhat less than the average weekly wage, and a little more than the minimum wage. Farm labourers in 1860 were getting less than a pound a week. Therefore an ounce of gold would represent about five weeks' wages for them. A skilled tradesman typically earned £2/10 per week, so an ounce of gold would represent nearly two weeks' wages<sup>376</sup>. Therefore it could perhaps be argued that an ounce of gold in 1860 was worth up to \$2000 in 2004 terms.

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## APPENDIX 3 - REFERENCES

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<sup>160</sup> *Gold at Harrietteville*, B Lloyd, 1982, Chapter 12.  
<sup>161</sup> The 'Maorilander' series of articles, eg *Alpine Observer*, 22 September 1899.  
<sup>162</sup> *Alpine Observer*, 11 May 1900.  
<sup>163</sup> Refer Tables B-9 to B-11 in *Bright Gold*, B Lloyd & K Nunn, 1987 for details of Upper Ovens dredging, and *Annual Reports* of the Victorian Mines Department for Buckland Valley operations.  
<sup>164</sup> *Myrtleford - Gateway to the Alps*, K Robertson, 1973, Chapter 8.  
<sup>165</sup> *Gold Dredging in Victoria*, D Dickinson, Mining & Geological Journal, January 1939; *Dredging for Gold - The Work of the Past Twelve Years*, D Swift, MGJ Vol 4, No 2, September 1950.  
<sup>166</sup> *Mining & Geological Journal*, March 1942 - *The New Harrietteville Dredge*, F Vincent.  
<sup>167</sup> Refer *Alpine Observer*, 14 October 1904 for local reporting on the passage of the new Mines' bill, and 9 June 1905 for first visit of newly-formed Sludge Abatement Board.  
<sup>168</sup> Suggested in Victorian Cultural Collaboration (VCC) article: *Gold - Rehabilitation & Reforestation*, Yvette Height, c2002. This topic is deserving of more research.  
<sup>169</sup> *Alpine Observer*, 11 October 1901.  
<sup>170</sup> Refer *Myrtleford - Gateway to the Alps*, K Robertson, 1973, pp81-89 for details on opposition to dredging.  
<sup>171</sup> See *Myrtleford - Gateway to the Alps*, K Robertson, 1973, Chapter 8.  
<sup>172</sup> *Bright Gold*, B Lloyd & K Nunn, 1987, pp197-198.  
<sup>173</sup> *Pearson Tewkesbury*, in *Handshakes*, No 156, July 1964, pp5-7.  
<sup>174</sup> *Alpine Observer*, 19 March 1909.

## MAKING FORESTS INTO SALEABLE RESOURCES:

<sup>175</sup> The Timber Industry in North East Victoria - An Economic Assessment, Prospect Consulting, May 2002.  
<sup>176</sup> Letters from J P Smith to H Smythe, Commissioner for Crown Lands, Port Phillip District, 26 & 28 April 1845, VPRS 5920 Pastoral Run Files.  
<sup>177</sup> See *Argus*, 16 November 1853 for first companies.  
<sup>178</sup> Even in 1861, almost 30% of houses in Bright-Wandiligong area were timber slab (1861 *Victorian Census*).  
<sup>179</sup> *Ovens & Murray Advertiser*, 6 October 1860.  
<sup>180</sup> *Ovens & Murray Advertiser*, 12 & 28 May 1863 (NB Miners Right Hotel was in Wandiligong, not Buckland).  
<sup>181</sup> *Ovens & Murray Advertiser*, 24 January 1873, 3 December 1881; *Alpine Gazette*, 6 August 1880; *Alpine Observer*, 22 June 1888.  
<sup>182</sup> *Gold at Harrietteville*, B Lloyd, 1982, p162.  
<sup>183</sup> *A History of the Kiewa Valley*, Temple & Lloyd, 1989, p97; *Ovens & Murray Advertiser*, 9 December 1880; *Alpine Observer*, 18 May 1900.  
<sup>184</sup> *Alpine Observer*, 19 March 1909.  
<sup>185</sup> *Alpine Observer*, 1 August 1902, 24 July 1903, 4 November 1904, 27 September 1907.  
<sup>186</sup> *The Interaction Between the Environment, Land Use & Hydrology of the Bogong High Plains &c*, R Lawrence, 1985 (unpubl doctoral thesis), p594.  
<sup>187</sup> *A History of the Kiewa Valley*, Temple & Lloyd, 1989, p104; R Addinsall of Mount Beauty provided supplementary information (pers comm, February 2004).  
<sup>188</sup> *The Interaction Between the Environment, Land Use & Hydrology of the Bogong High Plains &c*, R Lawrence, 1985 (unpubl doctoral thesis), p594.  
<sup>189</sup> *Myrtleford - Gateway to the Alps*, K Robertson, 1973, pp119-120.  
<sup>190</sup> *Softwoods in Victorian Forestry*, Forests Commission of Victoria Discussion Paper, October 1982.



- <sup>191</sup> Eg Department of Mines and Water Supply, Victoria, *Annual Report 1907*, Plate F.
- <sup>192</sup> Report from A G Johnstone to the Conservator of Forests, 19 September 1914.
- <sup>193</sup> *Study of Historic Forest Activity Sites for the North East RFA Region*, D Bannear, draft 24 October 1997.
- <sup>194</sup> *Wandiligong - A Valley Through Time*, Wandiligong Preservation Society, 1988, p78.
- <sup>195</sup> *Study of Historic Forest Activity Sites for the North East RFA Region*, D Bannear, draft 24 October 1997.
- <sup>196</sup> *Myrtleford - Gateway to the Alps*, K Robertson, 1973, p116.
- <sup>197</sup> *Study of Historic Forest Activity Sites for the North East RFA Region*, D Bannear, draft 24 October 1997.
- <sup>198</sup> *Guide to Bright & District*, Bright & District Chamber of Commerce, n.d.
- <sup>199</sup> *Softwoods in Victorian Forestry*, Forests Commission of Victoria Discussion Paper, October 1982.
- <sup>200</sup> *Study of Historic Forest Activity Sites for the North East RFA Region*, D Bannear, draft 24 October 1997.
- <sup>201</sup> *Softwoods in Victorian Forestry*, Forests Commission of Victoria Discussion Paper, October 1982.
- <sup>202</sup> *Wandiligong - A Valley Through Time*, Wandiligong Preservation Society, 1988, p79; supplementary information from Hancock Watch web-pages, 2004.
- <sup>203</sup> *Alpine Observer*, 27 February 1920.
- <sup>204</sup> Pers comm, Bill Sutton, Mount Beauty, April 2004; *Vision & Realisation*, Education Department of Victoria, 1973, Vol 3 p917.
- <sup>205</sup> *Timber Plantations in Northern NSW*, Northern NSW Forestry Services, 2003.
- <sup>206</sup> Pers comm, Alex McCullough, Mount Beauty, March 2004.
- <sup>207</sup> *Agriculture* file in Jean Telford Resource Room, Railway Museum, Bright.
- <sup>208</sup> *Management Plan, Alpine National Park, Bogong Unit*, DCE, September 1992, p250

#### TAPPING NATURAL ENERGY SOURCES:

- <sup>209</sup> Original research notes held by A Swift, Bright.
- <sup>210</sup> *Gold at Harrietville*, B Lloyd, 1982, p52. Wallace's Deep Lead Mine at Bright had a 45-foot diameter waterwheel.
- <sup>211</sup> eg Southern Cross Mine, East Branch, Ovens River, Harrietville, which still has the remains of a water-powered beam pump.
- <sup>212</sup> eg Buffalo Hydraulic Sluicing Co, Buckland River - *Alpine Observer*, 24 December 1897.
- <sup>213</sup> Photo held at Harrietville Historical Society Inc Museum, Pioneer Park, Harrietville.
- <sup>214</sup> *Ovens & Murray Advertiser*, 24 January 1873, 3 December 1881; *Alpine Gazette*, 6 August 1880.
- <sup>215</sup> *Water-powered Flour Mills in Australia*, Morawa Historical Society, n.d. Opening date from *Alpine Observer*, 22 June 1888.
- <sup>216</sup> *Australian Mining Standard*, 1892, p159.
- <sup>217</sup> *Alpine Observer*, 2 June 1905.
- <sup>218</sup> Original research notes held by A Swift, Bright.
- <sup>219</sup> *Alpine Observer*, 13 October 1899.
- <sup>220</sup> *Gold at Harrietville*, B Lloyd, 1982, p150.
- <sup>221</sup> Original text supplied by Dr Ruth E Lawrence, Latrobe University, Bendigo Campus, based on her doctoral thesis, *The Interaction Between the Environment, Land Use & Hydrology of the Bogong High Plains &c*, 1985 (unpubl).

#### CATERING FOR TOURISTS/LODGING PEOPLE:

- <sup>222</sup> *The Mount Buffalo Story*, Webb & Adams, 2000, p34.
- <sup>223</sup> Article from the Melbourne *Herald* reproduced in *Alpine Observer*, 1 May 1931.

- <sup>224</sup> *Ovens & Murray Advertiser*, 8 November 1872.
- <sup>225</sup> *Ovens & Murray Advertiser*, 27 June 1874.
- <sup>226</sup> *The Interaction Between the Environment, Land Use & Hydrology of the Bogong High Plains &c*, R Lawrence, 1985 (unpubl doctoral thesis), p602.
- <sup>227</sup> *Alpine Observer*, 22 June 1883.
- <sup>228</sup> *Bright Gold*, B Lloyd & K Nunn, 1987, pp119-120.
- <sup>229</sup> *Alpine Observer*, 13 April 1888.
- <sup>230</sup> *The Interaction Between the Environment, Land Use & Hydrology of the Bogong High Plains &c*, R Lawrence, 1985 (unpubl doctoral thesis), p602.
- <sup>231</sup> Age article reproduced in *Alpine Observer*, 15 November 1889.
- <sup>232</sup> *Bright Gold*, B Lloyd & K Nunn, 1987, pp135-138.
- <sup>233</sup> *Picturesque Victoria*, Victorian Railways, 1908, p179.
- <sup>234</sup> *Alpine Observer*, 11 December 1891
- <sup>235</sup> *Myrtleford - Gateway to the Alps*, K Robertson 1973, p199.
- <sup>236</sup> *Bright Gold*, B Lloyd & K Nunn, 1987; *Alpine Observer*, 21 November 1902.
- <sup>237</sup> See *Alpine Observer*, 15 December 1899 & 17 September 1920 for impacts on fishing.
- <sup>238</sup> *Picturesque Victoria*, Victorian Railways, 1908, p174.
- <sup>239</sup> *Illustrated Guide to the Bright District*, Bright District Progress Association and Alpine Club, n.d. (c1920s)
- <sup>240</sup> Research notes in 'Walks' file, Jean Telford Room, Railway Museum, Bright.
- <sup>241</sup> *Bright Gold*, B Lloyd & K Nunn, 1987, p224.
- <sup>242</sup> Hotham Heights press cuttings scrapbook, 1920s & 30s - copy held at Harrietville Historical Society Inc Museum.
- <sup>243</sup> *Skiing into History - 1924-1984*, J Lloyd, 1986, pp40,48.
- <sup>244</sup> Feature article by 'Sandy Rollingstone' refers to borrowing Hanckar's 'snow shoes', *Alpine Observer*, 22 December 1899. Also *Gippsland Miners Standard*, 18 July 1899, referring to Louis Hanneker's (*sic*) sliders. *Gold at Harrietville*, B Lloyd, 1982, p45. *The Art of the Ski*, from Melbourne *Herald*, July 1926, in Hotham Heights press cuttings scrapbook, 1920s & 30s - copy held at Harrietville Historical Society Inc Museum.
- <sup>245</sup> *Skiing into History - 1924-1984*, J Lloyd, 1986, pp94,321.
- <sup>246</sup> *Skiing into History - 1924-1984*, J Lloyd, 1986, pp47.
- <sup>247</sup> *Skiing into History - 1924-1984*, J Lloyd, 1986, p48.
- <sup>248</sup> *The Mount Buffalo Story*, Webb & Adams, 2000, pp105-107.
- <sup>249</sup> *Gold at Harrietville*, B Lloyd, 1982, pp43-45,94,134.
- <sup>250</sup> Cabena, 1970, quoted in *The Interaction Between the Environment, Land Use & Hydrology of the Bogong High Plains &c*, R Lawrence, 1990 (unpubl doctoral thesis).
- <sup>251</sup> *Gold at Harrietville*, B Lloyd, 1982, p86.
- <sup>252</sup> Figures from *Skiing Into History*, J Lloyd, 1986, and Mount Hotham Resort Management *Annual Report*, 2002.
- <sup>253</sup> *Skiing Into History*, J Lloyd, 1986, pp48-49. *A Plea for Our Mountains*, in *Argus*, 1926, in Hotham Heights press cuttings scrapbook, 1920s & 30s - copy held at Harrietville Historical Society Inc Museum.
- <sup>254</sup> Hotham Heights press cuttings scrapbook, 1920s & 30s - copy held at Harrietville Historical Society Inc Museum.
- <sup>255</sup> *Skiing Into History*, J Lloyd, 1986, p285.
- <sup>256</sup> *Skiing Into History*, J Lloyd, 1986, pp298,307,315.
- <sup>257</sup> Huts are listed in *The Interaction Between the Environment, Land Use & Hydrology of the Bogong High Plains &c*, R Lawrence, 1990 (unpubl doctoral thesis), Appendix IV, Part E, pp511-513.
- <sup>258</sup> *Ovens & Murray Advertiser*, 30 October 1857.
- <sup>259</sup> *Goldfields & Mineral Districts of Victoria*, R Brough Smyth, 1869, Appendix B, Nos 40 & 41.
- <sup>260</sup> *Ovens & Murray Advertiser*, 21 August 1866.
- <sup>261</sup> *Goldfields & Mineral Districts of Victoria*, R Brough Smyth, 1869, Appendix C.
- <sup>262</sup> *Goldfields & Mineral Districts of Victoria*, R Brough Smyth, 1869, Appendix C.
- <sup>263</sup> *The Melbourne Walker*, Vol 38, 1967, Melbourne Walking Club, pp21-22 - quotes figures from *Alpine Observer*.
- <sup>264</sup> *Myrtleford - Gateway to the Alps*, K Robertson, 1973, pp226-229.

- <sup>265</sup> Myrtleford - Gateway to the Alps, K Robertson, 1973, pp226-229.  
<sup>266</sup> Statistics from Lake Buffalo, © Goulburn Murray Water, 1997-2003, on GMW web-site.  
<sup>267</sup> A Report on the Buffalo River (Lake Buffalo) Water Supply Catchment, Fyfe & Ransome, May 1984, Soil Conservation Authority.  
<sup>268</sup> Media Release, 10 April 2003, Goulburn Murray Water

### MAKING SETTLEMENTS TO SERVE RURAL AUSTRALIA:

- <sup>269</sup> Argus, 24 January 1854.  
<sup>270</sup> Ovens & Murray Advertiser, 29 October 1859.  
<sup>271</sup> Myrtleford - Gateway to the Alps, K Robertson, 1973, p24.  
<sup>272</sup> Letter from R Stephenson to his wife at Beechworth, March 1854, quoted in Bright, A Local History, The Early Years, A M Breen, 1979 (unpubl thesis - Bright Library).  
<sup>273</sup> Myrtleford - Gateway to the Alps, K Robertson, 1973, p73.  
<sup>274</sup> Ghost Towns of the High Country, L Steenhuis, 1998, pp6-8,45-46.

### REMEMBERING SIGNIFICANT PHASES:

- <sup>275</sup> eg Ovens & Murray Advertiser, 5 January 1878 - sports meeting at Gundowring on Mr Ronan's land; Alpine Observer, 10 April 1885 - Dederang Annual Races; Yackandandah Times, 30 August 1890 - ball at Tawonga Public Hall.  
<sup>276</sup> Ovens & Murray Advertiser, 16 June 1860  
<sup>277</sup> eg Alpine Observer, 27 November 1908 - commercial building booming.  
<sup>278</sup> Australian Bureau of Statistics.  
<sup>279</sup> eg Advertisement in Yackandandah Times, 6 September 1890.  
<sup>280</sup> A History of the Kiewa Valley, Temple & Lloyd, 1989, pp64,92-95.  
<sup>281</sup> A History of the Kiewa Valley, Temple & Lloyd, 1989, pp64,93-94.  
<sup>282</sup> Ovens & Murray Advertiser, 17 January 1860.  
<sup>283</sup> Ovens & Murray Advertiser, 5 May 1860.  
<sup>284</sup> The Constitution (Beechworth), 3 November 1860.  
<sup>285</sup> Earliest reference found, Ovens & Murray Advertiser, 2 March 1865 - Parish of Freeburgh exists on earlier survey plans.  
<sup>286</sup> Vision & Realisation, Education Department of Victoria, 1973, Vol 3, p920.  
<sup>287</sup> eg Ovens & Murray Advertiser, 15 March 1862.  
<sup>288</sup> Harrietville - 115 Years of Continuous Gold Seeking, E Hoy, n.d. (c1967).  
<sup>289</sup> Gold at Harrietville, B Lloyd, 1982, pp2-3.  
<sup>290</sup> The Constitution (Beechworth), 22 May 1860.  
<sup>291</sup> Gold at Harrietville, B Lloyd, 1982, Chapter 6.  
<sup>292</sup> Gold at Harrietville, B Lloyd, 1982, Chapter 12  
<sup>293</sup> Background extracted from Mudgegonga's Hall of Fame, B & M Gibney, 1988.  
<sup>294</sup> Australian Bureau of Statistics.  
<sup>295</sup> Australian Bureau of Statistics.  
<sup>296</sup> The Constitution (Beechworth), 20 April 1860.  
<sup>297</sup> See Bright Gold, B Lloyd & K Nunn, 1987, Chapters 10 & 11.  
<sup>298</sup> Refer Geological Parish Plan, Porepunkah, Counties of Bogong & Delatite, J Easton, 25 February 1910, for areas dredged (Plan 1157/G/1, Vic Dept of Mines).  
<sup>299</sup> Picturesque Victoria, Victorian Railways, 1908, p174.  
<sup>300</sup> Vision & Realisation, Education Department of Victoria, 1973, Vol 3, p972; A History of the Kiewa Valley, Temple & Lloyd, 1989.

- <sup>301</sup> Alpine Observer, 3 March 1893  
<sup>302</sup> Alpine Observer, 14 March 1890  
<sup>303</sup> Alpine Observer, 11 October 1901  
<sup>304</sup> Alpine Observer, 15 January 1897, + following issues.  
<sup>305</sup> Alpine Observer, 1897 onwards - advertisements for W Moore's sales at Ryder's yards.  
<sup>306</sup> Alpine Observer, 27 April 1900  
<sup>307</sup> eg Alpine Observer, 9 February 1917  
<sup>308</sup> Refer Mine Managers' Reports in the Mining & Geological Journal, 1946-51.  
<sup>309</sup> A History of the Kiewa Valley, Temple & Lloyd, 1989.  
<sup>310</sup> Letter from R Stephenson to his wife at Beechworth, March 1854, quoted in Bright, A Local History, The Early Years, A M Breen, 1979 (unpubl thesis - Bright Library).  
<sup>311</sup> Ovens & Murray Advertiser, 22 October 1858.  
<sup>312</sup> eg Ovens & Murray Advertiser, 23 June 1860 and The Constitution (Beechworth) 27 June 1861.  
<sup>313</sup> Wandiligong - A Valley Through Time, Wandiligong Preservation Society, 1988, p15. 1861 census figures: 1388 people at Morses & Growlers Creek, & Ovens River.  
<sup>314</sup> Mining Surveyors & Registrars Reports (quarterly), Department of Mines, 1864-65.  
<sup>315</sup> Refer Reminiscences of Early Wandiligong, J Walker, published in the Alpine Observer, 20 August to 1 October 1920, for descriptions of the early township.  
<sup>316</sup> Wandiligong - A Valley Through Time, Wandiligong Preservation Society, 1988, p15-16. 1905 figure from Australian Handbook 1905, p485.  
<sup>317</sup> eg Myrtleford - Alpine Observer, 12 September 1884; Bright & Wandiligong - Ovens & Murray Advertiser, 2 April 1860.  
<sup>318</sup> eg Ovens & Murray Advertiser, 23 June 1860.  
<sup>319</sup> 1861 & 1871 Census figures quoted in Bright, A Local History, The Early Years, A M Breen, 1979 (unpubl thesis - Bright Library).  
<sup>320</sup> 1871 Census figures quoted in Wandiligong - A Valley Through Time, Wandiligong Preservation Society, 1988, p36.  
<sup>321</sup> Wandiligong - A Valley Through Time, Wandiligong Preservation Society, 1988, p36.

### CONSERVING FRAGILE ENVIRONMENTS - ASSESSING SCIENTIFICALLY DIVERSE ENVIRONMENTS:

- <sup>322</sup> Following text supplied by Dr Ruth E Lawrence, Latrobe University, Bendigo Campus, 2004.  
<sup>323</sup> Mueller, F. 1855. Descriptive characteristics of new alpine plants from continental Australia. Transactions of the Philosophical Society of Victoria, 1: 96-111  
<sup>324</sup> Neumayer, G. 1869. Results of the magnetic survey of the Colony of Victoria executed during the years 1858-1864.  
<sup>325</sup> Stirling, J. 1903. Notes on a census of the flora of the Australian Alps. Transactions of the Botanical Society of Edinburgh, 68: 319-395  
<sup>326</sup> Smyth, R.B. 1876. Report: north-eastern district. Geological Survey of Victoria, Progress Report, 3: 8-27  
<sup>327</sup> Stirling, J. 1885. Notes on the meteorology of the Australian Alps. Transactions of the Royal Society of Victoria, 21: 123-145  
<sup>328</sup> Stirling, J. 1887. The physiography of the Australian Alps. Proceedings of the Australasian Association for the Advancement of Science, 1: 359-385  
<sup>329</sup> Illustrated Australian News, 1890, Australian Science Association, 1 February 1890, p18  
<sup>330</sup> Various articles in The Victorian Naturalist.  
<sup>331</sup> Report from Mr. S. Callanan (Assistant Surveyor): "Re: Bogong High Plains". File No. T 74607. Department of Sustainability and Environment, Melbourne  
<sup>332</sup> Holdenson, P.J et al, 1917. White coal: the Victorian Hydro-Electric Company's scheme for the generation of

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*electricity by water power*. The Victorian Hydro-Electric Company Ltd., Melbourne  
<sup>333</sup> eg S.E.C. 1935. Kiawa Hydro-Electric Scheme: report by civil engineer: Part I -revision of previous reports. State Electricity Commission, Melbourne  
<sup>334</sup> Carr, S.G.M. & Turner, J.S. 1959. The Ecology of the Bogong High Plains, I The environmental factors and the grassland communities, & II Fencing experiments in grassland, *Australian Journal of Botany*, 7: 12-33, 34-63

#### CONSERVING AUSTRALIAN RESOURCES:

<sup>335</sup> Myrtleford - Gateway to the Alps, K Robertson, 1973, p17  
<sup>336</sup> VA 534, Public Record Office Victoria.  
<sup>337</sup> Local forestry history 1920s to 1950 condensed principally from *Study of Historic Forest Activity Sites for the North East RFA Region*, D Bannear, draft 24 October 1997.  
<sup>338</sup> *The Interaction Between the Environment, Land Use & Hydrology of the Bogong High Plains &c*, R Lawrence, 1985 (unpubl doctoral thesis), p595.  
<sup>339</sup> *Alpine Observer* 13 January 1950  
<sup>340</sup> Pers comm, D Rolland, former Head Forester, FCV, Bright, May 2004, and K Rothenberger, ex-FCV, Myrtleford, June 2004.

#### CONSERVING FRAGILE ENVIRONMENTS:

<sup>341</sup> Tower Hill became a State Game Reserve in 1961. Information from Parks Victoria Education Resource Kit based on *National Parks of Victoria 1866-1956*, S Bardwell (unpubl doctoral thesis)  
<sup>342</sup> *The Mount Buffalo Story*, Webb & Adams, pp42,44.  
<sup>343</sup> Refer Chapter 5, *The Mount Buffalo Story 1898-1998*, Webb & Adams, 1998 for details.  
<sup>344</sup> *The Mount Buffalo Story 1898-1998*, Webb & Adams, 1998, pp44-45.  
<sup>345</sup> *A Study of the Land in the Mount Buffalo National Park*, R K Rowe, 1970 (Soil Conservation Authority), p50.  
<sup>346</sup> *The Mount Buffalo Story 1898-1998*, Webb & Adams, 1998, Chapter 8.  
<sup>347</sup> *A Study of the Land in the Mount Buffalo National Park*, R Rowe, 1970, p12.  
<sup>348</sup> *A Study of the Land in the Mount Buffalo National Park*, R K Rowe, 1970 (Soil Conservation Authority), p50.  
<sup>349</sup> *Mount Buffalo National Park Proposed Management Plan*, DCE, September 1992, p15.  
<sup>350</sup> *Illustrated Australian News*, 16 May 1868  
<sup>351</sup> *The Interaction Between the Environment, Land Use & Hydrology of the Bogong High Plains &c*, R Lawrence, 1985 (unpubl doctoral thesis), p602.  
<sup>352</sup> *Land Act 1884* (Vic).  
<sup>353</sup> Letter, J Stirling to Victorian Surveyor-General, 20 February 1886 (Lands Department File, Omeo I 1469).  
<sup>354</sup> *Grazing the High Country*, P Cabena, 1980 (unpubl Masters Thesis, University of Melbourne), p106.  
<sup>355</sup> *The Alps at the Crossroads*, Dick Johnson, 1974, pp129-132.  
<sup>356</sup> *The Alps at the Crossroads*, Dick Johnson, December 1974.  
<sup>357</sup> *Alpine National Park Bogong Unit Management Plan*, 1992, Department of Conservation & Environment, p14.

#### MIGRATING TO SEEK OPPORTUNITY:

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<sup>358</sup> Census figures quoted in *Bright, A Local History, The Early Years*, A M Breen, 1979 (unpubl thesis - Bright Library).  
<sup>359</sup> Sample Cornish references: *Bright Gold*, B Lloyd & K Nunn, 1987, pp28,29,60,61,87,220.  
<sup>360</sup> Extracted from Alpine Shire mining sites database held by R Kaufman, Bright.  
<sup>361</sup> Extracted from Alpine Shire mining sites database held by R Kaufman, Bright.  
<sup>362</sup> *Ovens & Murray Advertiser*, 25 July 1859.  
<sup>363</sup> Eg Geoffrey Serle in *The Golden Age*, 1968, p335.  
<sup>364</sup> *Mudgegonga's Hall of Fame*, B & M Gibney, 1988, p34.  
<sup>365</sup> *Tobacco in the Ovens Valley*, D Talbot, n.d. (c2000), p7.  
<sup>366</sup> *From the Steps of Bonegilla*, ed H Pithie, 2000, p6.  
<sup>367</sup> *Study of Historic Forest Activity Sites for the North East RFA Region*, D Bannear, draft 24 October 1997.  
<sup>368</sup> *From the Steps of Bonegilla*, ed H Pithie, 2000, p7.  
<sup>369</sup> *Historic Tobacco Kilns in the Rural City of Wangaratta*, J Verrocchio, 1998, p21-22.  
<sup>370</sup> *Historic Tobacco Kilns in the Rural City of Wangaratta*, J Verrocchio, 1998, p22,24.  
<sup>371</sup> *Italian Craftsmanship and Building in Victoria*, C Sagazio, 1990 (National Trust), p27.  
<sup>372</sup> *The Mount Buffalo Story*, Webb & Adams, 2000, pp115-126.  
<sup>373</sup> *Mountain Memories - Sixty Years of Skiing*, M Hull, 1990, pp10,76-77.  
<sup>374</sup> *Skiing into History*, J Lloyd, 1986, pp212,222.  
<sup>375</sup> *Skiing into History*, J Lloyd, 1986 - refer Falls Creek section.  
<sup>376</sup> Wages from *Select Documents in Australian History 1851-1900*, Vol II, M Clark, 1977 paperback, p243-244.